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The CHIEFS of NAVAL OPERATIONS

and ADMIRAL'S HOUSE

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Rear Admiral Richard Wainwright
3 Dec 1909—17 Dec 1911

Rear Admiral Charles E. Vreeland
17 Dec 1911—11 Feb 1913

Rear Admiral Bradley A. Fiske
11 Feb 1913—11 May 1915

Admiral William S. Benson
11 May 1915—25 Sept 1919

Admiral Robert E. Coontz
1 Nov 1919—21 Jul 1923

Admiral Edward W. Eberle
21 Jul 1923—14 Nov 1927

Admiral Charles F. Hughes
14 Nov 1927—17 Sept 1930

Admiral William V. Pratt
17 Sept 1930—30 Jun 1933

Admiral William H. Standley
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The CHIEFS OF NAVAL OPERATIONS and ADMIRAL'S HOUSE

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ADMIRAL'S HOUSE AND

Fittingly for the atomic space age Navy, The Chief of Naval Operations' quarters, Admiral's House, stands amidst some of the Navy's most complex and far reaching scientific operations. Passing between two massive anchors, sentries of the sea that flank the Massachusetts Avenue entrance to the U.S. Naval Observatory, a gently rising drive brings one to a handsomely landscaped house identified as "Quarters A." This is Admiral's House. For more than a generation it has served as home port for the Chief of Naval Operations.

Admiral's House itself dates from 1893, but the Naval Observatory that surrounds it represents the Navy's leadership in science and technology for many generations. Thus the senior naval officer of today's mighty forces for freedom, in the brief times he can be home, appropriately lives like the commander afloat amidst unresting machines and men ever probing out into the seas of earth and space, on watch for America. Timekeeper of the space age, the Naval Observatory has been universally recognized as one of the world's foremost scientific institutions since before the Civil War.

A source of the Navy's professional competence from earliest times has been the pursuit of excellence. Courage, skill, leadership, training, preparation, perseverance, and audacity have all proudly played their role in the Navy's service to each generation. Intermingled with them has been scientific knowledge, the "Ex Scientia Tridens" of the Naval Academy seal.

Give me a fast ship "for I intend to go in harm's way" said John Paul Jones—and did, valiantly, immortally.

A few years later, the United States built *Constitution,* "Old Ironsides," *Constellation,* the "Yankee Race Horse," and other frigates in accord with the specific policy from which the Navy has never deviated: Its ships and weapons should be the best of their type in the world. The skill that built fast ships and rigged and fought them came from the scientific approach as surely as does the Polaris submarine, the complex nuclear powered aircraft carrier, the communication and navigation satellites of the 20th century.

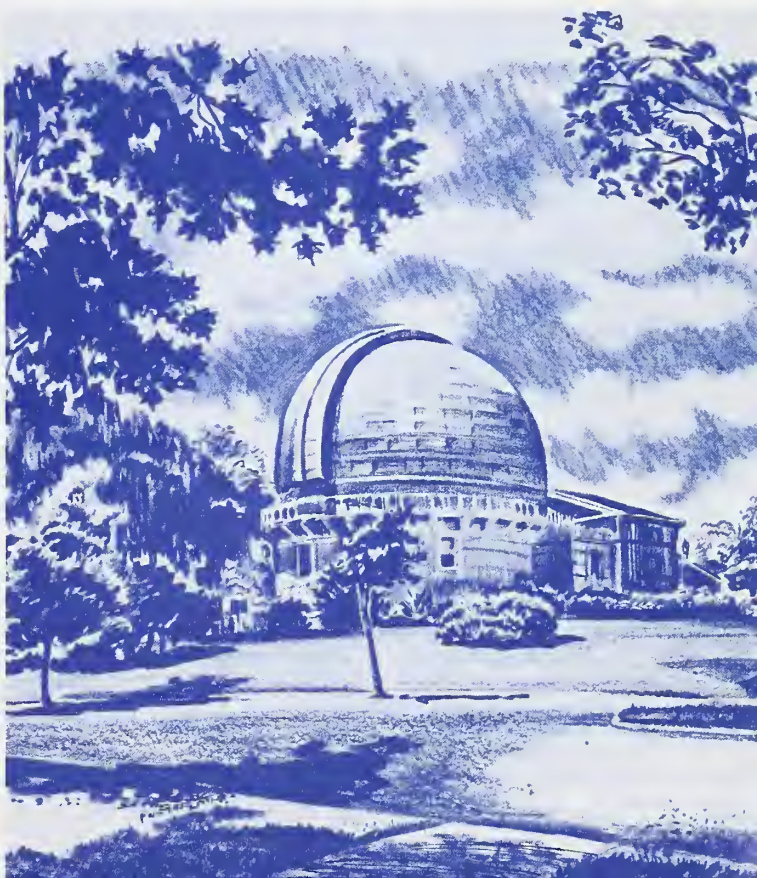
From the day man first ventured to sea until he orbited the globe and now explores ever deeper into the universe opening beyond, the stars have guided the navigator across trackless reaches. Early in our national life, statesmen like James Monroe and John Quincy Adams recognized the importance of systematic observations of celestial bodies to our Navy, to seaborne commerce, and to scientific progress. The founding of an observatory was urged.

The first positive step toward a naval observatory took place in 1830 when the Secretary of the Navy established the Depot of Charts and Instruments as a central office for all nautical instruments and charts. A house was rented for the Depot in Washington on "G" Street NW., between 17th and 18th Streets; in a circular building nearby chronometer accuracy was checked by means of sextant and circle observations.

Lt. L. M. Goldsborough, first Commanding Officer, became a Flag Officer in the Civil War and led the early successful amphibious assaults on Roanoke Island, N.C.—in a sense symbolizing the part the work of the Naval Observatory-to-be would play in the vast combined operations in the World Wars of the 20th century.

Lt. Charles Wilkes, destined for fame as explorer of the Pacific and Antartica, followed Goldsborough in 1833. Wilkes removed the Depot to Capitol Hill where, at his own expense, he set up a small observatory. In 1838, the Depot began the

ENVIRONS



constant observations in astronomy, magnetism, and meteorology which continued to 1842 and laid the foundation for a permanent naval observatory.

Congress authorized the Navy in 1842 to construct a suitable permanent building for the Depot of Charts and Instruments. The act made no mention of an astronomical observatory, but the site between 23d and 24th Streets near "E" Street NW., was chosen by President Tyler and the building plans drawn with an observatory in view. The new location was ready within two years. To it as first Superintendent of the Naval Observatory came Lt. Matthew Fontaine Maury, soon to be known whereever men voyaged into the unknown as "Pathfinder of the Seas."

During his long tour at the Naval Observatory, Maury created systematic hydrography in the United States. With data specially noted, at his request, in the logs of men-of-war and merchant ships throughout the world, he was able to construct reliable charts of prevailing winds, currents, "and all the physical features of the sea." His wind and track charts revolutionized the courses followed by all ships, greatly promoted economy in operation, and, of even greater importance, increased safety of life at sea. In Maury's work the world reaped one of the first of the many benefits which have come to it from the Navy's research programs.

In a few years foreign governments recognized Maury's stature as an oceanographer and vied to honor him. The Brussels International Conference of 1853, proposed by Maury, first organized the collection of hydrographic information as an inter-

Lieutenant Matthew Fontaine Maury, USN, pioneer in oceanography and "Pathfinder of the Seas." He did his great work at the old Naval Observatory which even before the Civil War had achieved worldwide recognition.

national program. Generations of mariners have been blessed by this naval officer scientist, and to this day some pilot charts issued by the Navy's Oceanographic Office carry the words, "Founded upon the researches made in the early part of the Nineteenth Century by Matthew Fontaine Maury while serving as a Lieutenant in the United States Navy."

Under Maury the Naval Observatory achieved universal renown for advances in astronomy as well as in navigation and oceanography. As early as January 1845, he initiated the program that continues uninterrupted to this day, of precise charting of the ever-changing sky.

Some of the Navy's most distinguished officers followed Maury as Superintendent of the Naval Observatory. Rear Adm. Charles H. Davis (1865–67, 1873–77) had commanded the Mississippi River

Captain Frederick V. McNair, USN, Superintendent of the Naval Observatory, 1890–1894, was the first resident of the present Admiral's House.

Scientists at the Naval Observatory always took a leading role in astronomical observations and calculations. The "Venus Transit Group" is pictured here in 1874.

Flotilla in some of the crucial campaigns of the Civil War. His ironclads won the battles at Fort Pillow and Memphis which split the Confederacy down to Vicksburg. Previous to this, Davis had spent 15 years in scientific assignments, principally coastal surveying, and he had contributed notably to technical and scientific journals. He had also helped found the National Academy of Sciences and was instrumental in publishing the *Nautical Almanac*.

Davis' successor, Rear Adm. John Rodgers (1877–82), was well known to his countrymen as the dynamic leader who started the powerful inland fleet on the western rivers that spearheaded Grant's victories, commanded the monitor which had crippled and captured the Confederate ram *Atlanta* and was a veteran of some 50 engagements with the forts at Charleston, S.C. In Korea, a few years later, he commanded the naval forces which stormed the Inchon forts to assure American rights under international law. Rodgers possessed one of the ablest scientific minds in the Navy. Like Davis, he had devoted a decade of service before the Civil War to oceanography, and commanded the highly successful North Pacific Exploring and Surveying Expedition (1852–56) which first charted the coasts of Japan and eastern Siberia. Later, he would be a principal architect of the construction program which produced the new steel Navy of the United States. As Superintendent of the Naval Observatory, Rodgers was responsible for the acquisition of

The beautiful surroundings of the Naval Observatory with Admiral's House in the background are shown in this drawing from the 1890's.

the site of the present buildings. With Davis and Rodgers, mathematicians and astronomers at the Observatory such as Simon Newcomb, George William Hill, and Asaph Hall won world reputations.

By 1880 the growth of the Federal City and its traffic closing in on the Naval Observatory made precise observations and measurements increasingly difficult in "unhealthy Foggy Bottom." President Hayes named a commission from Congress with the Observatory Superintendent "to select a site for a new Naval Observatory . . . upon an even degree of longitude west of Greenwich, and to possess . . . facility of access from the City of Washington, healthfulness, clearness of atmosphere, freedom from obstruction from the horizon, and freedom from objectionable vibrations from the traffic . . ."

On 28 February 1881, the Commission reported to the President that it had, "after due deliberation and careful scrutiny, selected Mrs. M. C. Barber's place on Georgetown Heights." On 5 April some 72 acres of "Pretty Prospect" were acquired from Mrs. Barber at a cost of $63,000. Appropriately, some of this land had earlier belonged to Benjamin Stoddert, first Secretary of the Navy. Here the achievements of the Naval Observatory would continue into the space age.

From the vantage point of the teeming 1960's one reads with interest the Commission's reason for selecting the location: "It is remote from any public road, being approachable only by a private carriage path, so that it enjoys the inestimable advantages of seclusion, quiet, and freedom from disturbance, either by frequent visitors or by passing vehicles . . . The site is protected against encroachment by deep ravines in the vicinity, which are likely long and perhaps forever to prevent its being hemmed in by buildings, whatever may be the growth of the city."

Events moved sedately in the stately 19th century. Ten years later the Naval Appropriation Act, approved 2 March 1891, provided funds for equipment, completing buildings, furniture, etc., at the Observatory and included an allotment of $20,000 for constructing an "official residence of the Superintendent." Leon E. Dessez, a Washington architect, drew the plans.

Mr. Dessez designed a three-story brick structure with extensive use of dormers and exhibiting a French Provincial influence that enjoyed considerable popularity as the Victorian era waned. The house provided satisfying comfort and gracious living on the eve of events that would launch the United States into world leadership as if following the track of the Navy out into the misty seas.

The Superintendent's house was "commissioned" in 1893 coincident with the transfer of the Naval

A portrait of Commodore Isaac Hull by J. W. Jarvis graces the mantel in this sitting room.

The handsome mirror above the dining room mantel was purchased for Admiral's House from the George Dewey estate by Mrs. George Anderson.

Observatory to the new location. Shortly thereafter the Nautical Almanac Office that had operated separately since 1849 joined the Observatory. Meanwhile in 1866 the Hydrographic Office had separated from the Observatory.

The Superintendent, Captain Frederick V. McNair, had a full naval career. He saw action afloat throughout most of the Civil War including the capture of New Orleans under Farragut and the amphibious assault on Fort Fisher with Porter. After the Observatory he would take command of the Asiatic Fleet; and the story has it that he relinquished it early so that his friend, George Dewey might get the command before he was too old—and just in time for fate to open the way to greatness.

A generation later Public Law 630 of the 70th Congress, approved 10 December 1928, authorized the Secretary of the Navy to assign the quarters to the Chief of Naval Operations. So began an even larger role for "Admiral's House" that like the role of the Naval Observatory, of the Navy, and of America would expand with the phenomenal speed of a mushrooming atomic cloud.

The painting of John Paul Jones by Arthur Conrad is framed through the entryway to the gracious living room at Admiral's House.

President Theodore Roosevelt addresses the crew of the USS Connecticut *after her return from the 'round-the-world cruise with the Great White Fleet in 1909.*

AIDES FOR OPERATIONS

Before this move into Admiral's House occurred much would happen. Change swept around the earth like a typhoon, hurtling the United States toward world leadership. Happily some leaders like President Theodore Roosevelt perceived that on this erupting planet the nation could not lead without strength—"Speak softly and carry a big stick." In a world three-quarters water, the first strength had to be afloat.

The emergence of the United States as a global power resulted in part from its rise as the ranking industrial producer, ever more closely linked by the sea to worldwide markets and raw materials sources, and in part to the need for protecting expanded overseas responsibilities like the Philippine Islands and Puerto Rico after 1898, the Panama Canal Zone after 1903; and in part to the buildup of German and Japanese navies rising to challenge England's long benign rule of the sea. Shortly afterwards, the balance of power in Asia, on which the security of the Philippines had depended, was upset by the outcome of the Russo-Japanese War and by the coincident withdrawal of British battleships, traditional stabilizing agents in the Far East. At this time, also, underdeveloped areas in the Caribbean and Central America again invited exploitation by military-minded European powers. In addition, the Navy bore responsibility, simultaneously, for projecting defensive power to the far side of the Pacific.

To Alfred Thayer Mahan (and to others like President Theodore Roosevelt and Admiral George Dewey), it now appeared that if the nation's security was to be preserved in the 20th century,

American foreign policy should seek to maintain the balance of power in Asia and Europe. Most Americans sensed truth in Mahan's repeated warnings, and gave heed to his counsel. Congress proceeded to move toward a balanced fleet whose battleships would be capable of meeting any probable enemy in his home waters. This fleet in part shaped, and in part was itself a response to, the new strategic requirements. The problems of its construction, supply, and training made demands beyond previous experience.

Accelerating changes in technology meanwhile were working the latest revolution in seapower. The decade beginning in 1900 saw the Navy gain remarkable new strengths as the submarine was followed by dreadnought battleships, long-range gunfire, turbine machinery, and fuel oil. The airplane would soon follow in the fleet. Its five battleships of the Spanish-American War squadrons had increased to 27 by 1910. The new science of radio brought them, and indeed all the fleet, into almost instant communication with Washington.

The fleet having by now outgrown its planning and control organization, Secretary of the Navy George von L. Meyer created a coordinating staff of four members, called "Aides." Of these, the most important was the Aide for Operations, responsible to the Secretary for operations, planning, intelligence, fleet training and logistics, and ship movements, as well as recommending the appointment of flag and commanding officers. War plans and strategic problems, to that time a function of the Naval War College, were now joined with operations and training under the Aide for Operations. This lineal predecessor of the Chief of Naval Operations also made joint planning a reality, since he sat as naval member of the Joint Board, a pioneer interservice agency, which had been established in 1903.

As first Aide for Operations, the Secretary appointed the distinguished Rear Adm. Richard Wainwright, far-seeing and progressive leader, widely known for his herosim against the Spanish at the Battle of Santiago. Taking office on 3 December 1909, Wainwright indefatigably and selflessly labored for the good of the Navy and America. He kept the Navy's main strike force intact by concentrating all battleships in the Atlantic Fleet. He then established a year-round rotation of overhaul which kept the fleet at the greatest strength practicable while equalizing the pressures on yard facilities. An enthusiastic backer of Comdr. William S. Sims, just then completing his epoch making six years as Director of Target Practice, Wainwright put the whole weight of his authority behind the rigorous training schedules and fleet competitions which had made American naval gunners the best in the world, following the tradition of Barry, Truxtun, Decatur, and Hull. Carefully constructed fleet problems took the bulk of the Navy each year to the New England coast, the Southern Drill Ground off Hampton Roads, and Guantanamo in succession. To assure availability of the nation's full seapower potential, older ships as the reserve were manned with "nucleus" crews adequate to take them to sea.

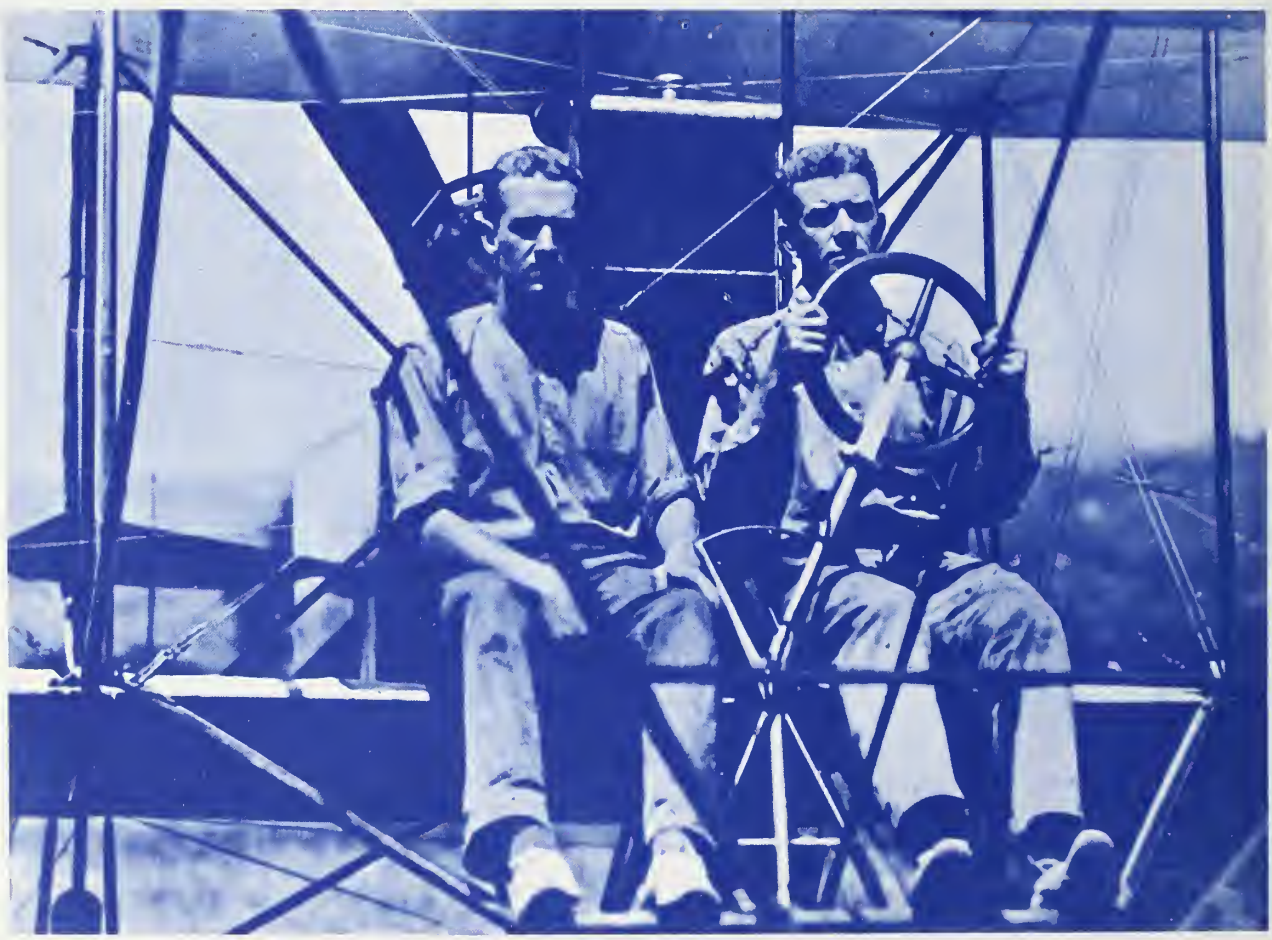
Significant for the future, though to most at the time seeming no larger than the proverbial "cloud like a man's hand," was the clumsy looking contraption which took off from the fore deck of the scout cruiser *Birmingham* in Hampton Roads, 14 November 1910. The runway had been extemporized from planks and the civilian pilot, Eugene Ely, had hung a couple of bicycle inner tubes around himself for safety.

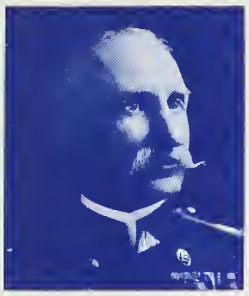
Wainwright clearly perceived the potential of the airplane in naval warfare and took steps both for defense and offense. By the year's end, tests on the monitor *Tallahassee* had shown the value of evasive tactics and strengthened deck armor as protection against aerial bombs. At the same time, the Admiral sent Lt. T. G. Ellyson, naval aviator No. 1, to train with Glenn Curtiss at San Diego, with Lt. John Rodgers, naval aviator No. 2, going shortly afterwards to the Wright brothers at Dayton.

When Wainwright's tenure ended on 17 December 1911, and he "turned over" to his successor, he had demonstrated the value of his office so conclusively that its permanence was assured. Four years later, by act of Congress, the Aide for Operations would become the Chief of Naval Operations.

Rear Adm. Charles E. Vreeland, the second Aide for Operations, demonstrated in his career once again the promise of American life, for he had entered the naval service at 13 as an apprentice, and was now principal adviser to the Secretary. In home waters, it became necessary to land seamen and Marines in Cuba to protect American interests, and in Nicaragua to maintain order and supervise elections. Meanwhile, in the Far East, withdrawal of British battleships to meet the challenge of Germany's growing fleet under Tirpitz, brought the Philippine defense problem into sharp focus. Vreeland urged increased construction, including battle cruisers. His vigorous program, while not adopted in entirety, had the effect of gaining administration and congressional acceptance of a definite construction policy. The standard was a fleet "superior to that of any great military power in the world," namely, any continental European nation. Vreeland keenly followed aviation development abroad. The Germans were stressing lighter-than-aircraft, having some 17 naval air stations operative on the North Sea and Baltic coasts in 1912. Having approved the location at Pensacola as the Navy's principal aviation center, he ordered battleship *Mississippi* there as parent ship for seaplanes.

Early naval aviation pioneers Lieutenant T. G. Ellyson, Naval Aviator No. 1 (rt.) and Lieutenant J. H. Towers, Naval Aviator No. 3, man a Curtiss biplane for flight.



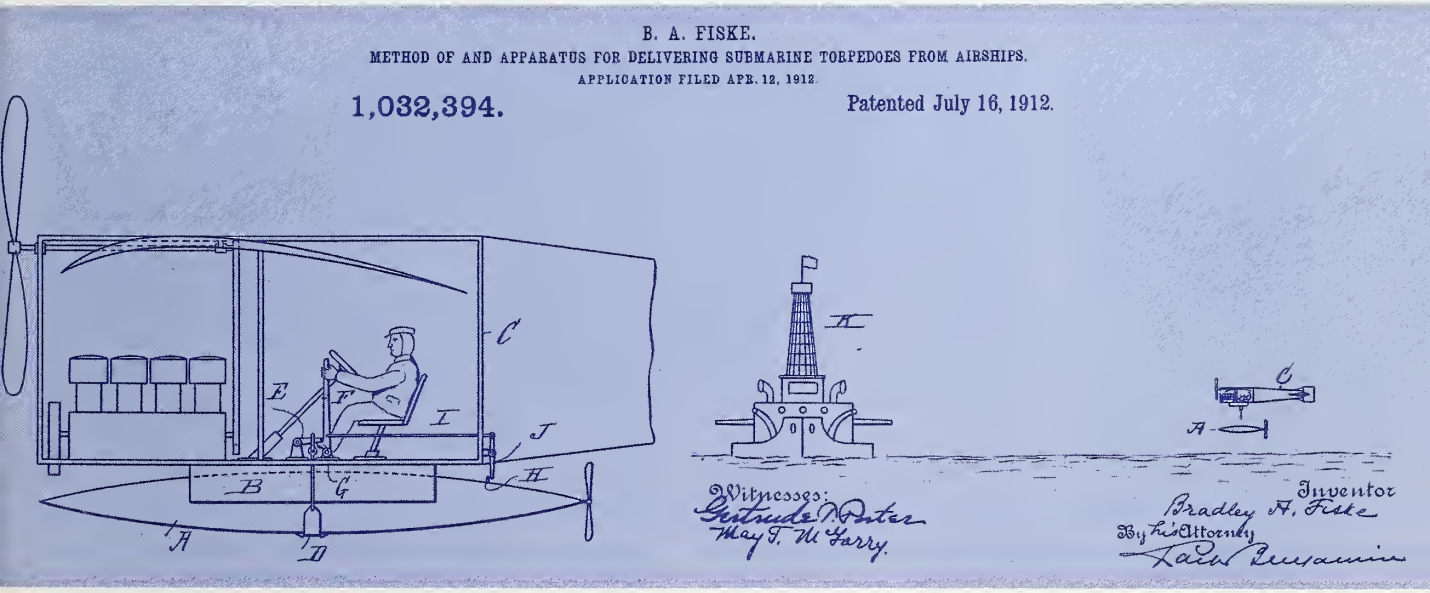


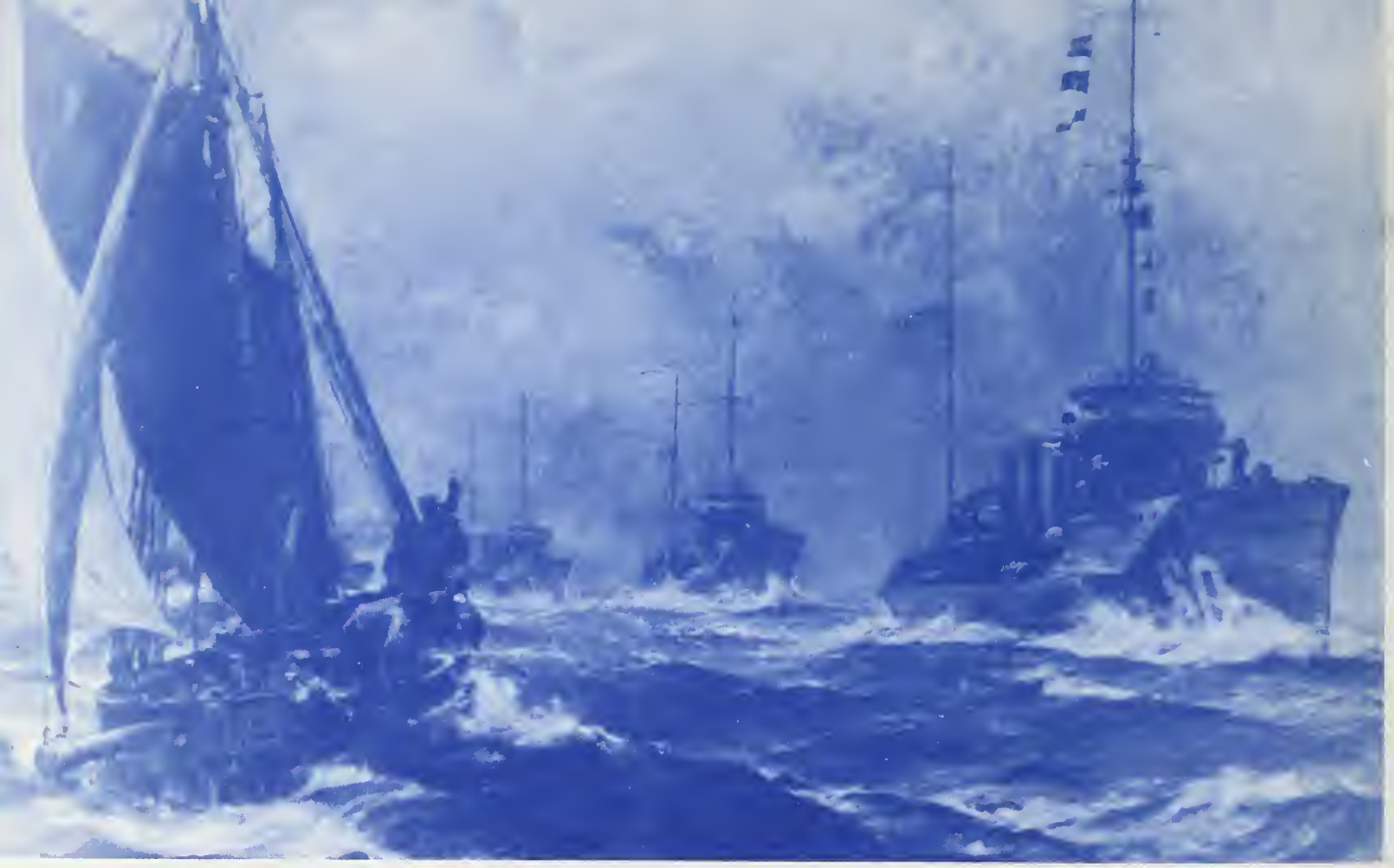
Rear Adm. Vreeland, in poor health, was relieved on 11 February 1913, by Rear Adm. Bradley A. Fiske. Already internationally famous for his contributions to electrical engineering, he had developed and invented a long list of communications and ordnance improvements, including the Navy's first telescopic gunsight and the turret rangefinder. A writer of books on techniques, strategy, and international politics, he also contributed prolifically to the professional journals, winning the Naval Institute Prize Essay award and becoming Franklin Institute Gold Medallist. But Fiske was equally a man of action; he had been with Dewey at Manila Bay where, sitting on the foremast crosstrees of the *Petrel*, he had taken ranges with his well-known stadimeter for the gunners below: History's first example of mechanical rangefinding in naval warfare.

As might be expected of the patentee of the first torpedo-carrying airplane, Admiral Fiske pushed the development of aviation in the Navy, strongly supporting the establishment of the flying school at Pensacola and the Aeronautic Board's recommendation that one aircraft be carried by every major combat ship. He followed with special interest the first combat employment of aircraft by the Navy—at Vera Cruz in May 1914—and personally commended LTJG P. N. L. Bellinger who flew mine observation missions over the harbor and tactical reconnaissance for the sailors and Marines in action ashore. But Fiske performed his outstanding service as Aide for Operations in alerting the nation to the need for naval preparedness when the war clouds long gathering over Europe finally burst into holocaust in 1914. In particular, he warned against the danger to the United States should a land power gain domination of Europe and simultaneously overthrow the Royal Navy to open a clear passage across the Atlantic. Americans, thoroughly aroused, swung behind the preparedness campaign of 1915–16 that came to fruition in the landmark Naval Appropriations Act of 1916.

Tirelessly persuading in every influential quarter, Fiske played a large role in Congress creating a Chief of Naval Operations with statutory responsibility, through the Secretary, for war plans and the Navy's instant readiness for combat.

Admiral Fiske's 1912 torpedo plane patent—the forefront of technological progress is a heritage in the U.S. Navy.


B. A. FISKE.
METHOD OF AND APPARATUS FOR DELIVERING SUBMARINE TORPEDOES FROM AIRSHIPS.
APPLICATION FILED APR. 12, 1912.
1,032,394. Patented July 16, 1912.
Witnesses: Gertrude Porter, May T. McGarry.
Inventor Bradley A. Fiske
By his Attorney Edwin Benjamin



"We are ready now, sir." Captain J. K. Taussig's destroyer squadron arrives at Queenstown, Ireland, 4 May 1917.

THE CHIEFS OF NAVAL

On 11 May 1915, the first Chief of Naval Operations, Rear Adm. William S. Benson, took over the Operations Office from Admiral Fiske. Provided by the new legislation with four-star rank and an adequate staff, the Chief of Naval Operations, as first order of business, turned to readying the Navy in the maritime crises caused by U-boat sinkings of American and other neutral ships on the high seas. Countermeasures to the stealthy and deadly attack of the submarine had to be developed. Perceiving the threat to the surface fleet, Admiral Fiske had strongly urged creation of a naval research organization of leading scientists, engineers, and inventors who would evaluate scientific developments and inventions for naval application and would recommend areas for continued investigation. Secretary Josephus Daniels appointed the Naval Consulting Board in the fall of 1915, with Thomas A. Edison as chairman and Admiral Benson as ex-officio member. This Board, the first broadly based research and development group to be established for defense purposes, immediately undertook the pioneer industrial census to meet the Navy's needs in war, a timely and far-sighted move, as the event proved. On the legislative front, Admiral Benson's sound testimony influenced the passage of the 1916 Naval Appropriations Act, which authorized construction of 10 battleships, 6 of the fastest and most powerful battle cruisers in the world, 10 light cruisers, 50 destroyers, and 58 submarines. Setting up the first

continuing construction program, long championed by naval men, this Act constituted the greatest naval authorization yet made. Just in time, it would raise the U.S. Navy to the rank of "second to none," as the United States was swept toward the challenge and hazards of world leadership.

When the "unrestricted" U-boat campaign brought the United States into World War I, April 1917, Admiral Benson effectively exercised overall direction of what would become one of the most stupendous naval efforts in history to that time. Pouring out new-type antisubmarine ships, aircraft, and mines, the Navy established the "Bridge to France," an unceasing stream of escorted convoys which carried General Pershing's armies and supplies overseas without the loss of a single soldier. The U.S. destroyers based on Queenstown, Ireland, were in the forefront of the escort and antisubmarine effort.

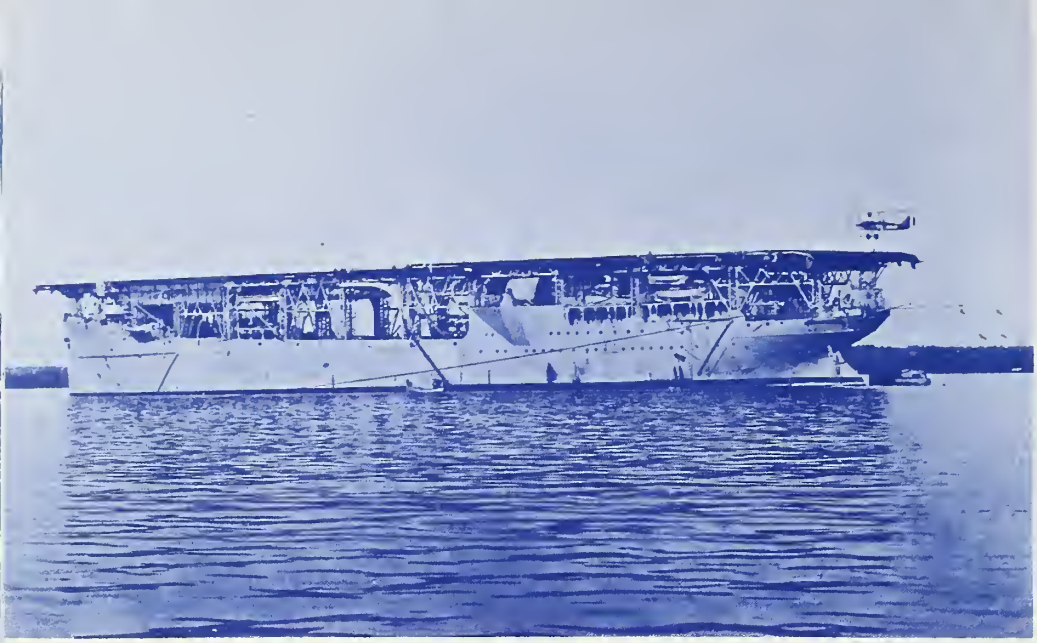
To protect the flanks of its transoceanic bridge against U-boats, the Navy sealed the North Sea with its Scotland-to-Norway mine barrage, an undertaking of hitherto unheard of magnitude. Similarly, it closed the Adriatic to egress by laying the "Otranto Barrage." The four-year-long grip of seapower, carried to its zenith by the U.S. Navy, inexorably brought the Central Powers to their knees.

Admiral Benson gave fullest support to Vice Adm. William S. Sims, commander of U.S. naval forces in Europe. To assure coordination with Allied naval plans, the Chief of Naval Operations went to Paris in August 1917 and participated in the initial sessions of the Allied Naval Council; the first agency to be set up to achieve interallied naval cooperation. At the Armistice, Admiral Benson returned to Europe as naval adviser to the U.S. delegation at the Peace Conference. Here he persuaded President Wilson to order construction resumed on the major combat ships, suspended during the war to concentrate on building destroyers and other antisubmarine types. With the Navy built to the strength authorized by the 1916 act, the United States would best be able to enforce its objectives of moderation in the peacemaking, to contain the instability which might be expected to follow the collapse of the Central Powers and, in all eventualities, to safeguard the vital interests of the United States.

OPERATIONS

Admiral Benson retired on 25 September 1919, with Adm. Josiah S. McKean acting until the new appointee, Admiral Robert E. Coontz, took over five weeks later. The retiring wartime Chief of Naval Operations could review with pride the accomplishments of the Navy which had grown so vastly and met the enemy so successfully under his direction; 834 warships had operated in regions as distant as Archangel, Vladivostok, and Manila. Stationed in Europe were 373 ships and 81,000 men. Another 45,000 officers and men served in the 24 cruisers and 52 liners of the transport force while, in addition, the 387 ships of the Naval Overseas Transportation Service carried six million tons of vital cargo across the Atlantic. Ashore, U.S. naval railroad batteries of 14-inch guns had dropped shells into Sedan and other targets with deadly accuracy at 20 miles range.

The young submarine service had well tested its mettle in antisubmarine warfare off the coast of Europe and had trained some of the leaders who would bring victory in the next desperate world cataclysm a generation later. Naval aviation, still not 10 years old, had grown amazingly to more than 3,100 officers and 45,000 enlisted men, of whom nearly half had been in France, supporting antisubmarine patrols and bombing raids against U-boat bases in Belgium. Back home, under Admiral Benson's direct supervision, the modern Naval District organization took shape, the Office of Naval Intelligence grew, and the Navy was operating the largest



USS Langley *(CV–1), the Navy's first aircraft carrier, led the way to air power's integration into the Fleet.*

radio system in the world. All of the future Chiefs of Naval Operations up to the mid-1950's served afloat preparing themselves unknowingly for the heavy responsibilities of safety of the nation in the years ahead.

New problems confronted Admiral Coontz. In the post-Versailles era, dominated by the slogan, "Back to Normalcy," the Navy found itself dangerously cut back in spite of unrest in the Caribbean and growing threats in far-off Asia. Reacting to sound reasoning by the Chief of Naval Operations, American delegates at the 1922 Washington Disarmament Conference salvaged three of the ten new battleships built or building. Two of the six battle cruisers were to be converted to aircraft carriers—*Saratoga* and *Lexington*—that would serve nobly in World War II. In the Pacific, the United States theoretically would command a 5 to 3 margin of superiority in "capital ships." However, surrender of the right to fortify the western Pacific as the price of achieving "limitation of naval armament" in reality deprived the naval ratio of its meaning. The Washington treaties, as Admiral Coontz accurately predicted, while retaining in effect the existing balance of naval strength among the United States, Great Britain, and Japan, would nevertheless prevent Americans from securing their interests in Asia should the dominant military state in the Far East seek to overturn that balance in the coming years.

Admiral Coontz devoted much effort to holding naval strength at 82,000 men against "economy blocs" which turned a blind eye to the portent of unrest in China, the resentments seething in Europe and the responsibilities of world leadership for the United States. He likewise pressed forward the constructive aviation program which, among many broad areas of progress like antiaircraft gunnery, submarines, engineering, may be considered the Navy's brightest achievement in the decade of the 1920's. Creation of the Bureau of Aeronautics in 1921 was followed, the next year, by the commissioning of U.S.S. *Langley*, ex-collier converted to aircraft carrier. Naval officers formed, directed and operated the Navy's aviation. The *Langley's* limited flight deck saw the pioneer takeoffs and landings followed by crowded years of flight operations as Towers, Chevalier, Mitscher, Ramsey, and other gallant officers created the tactical proficiency which early put United States naval aviation into the lead over all others. Britain's Royal Navy lost ground under land air force control; the French were entering naval aviation as a wholly new enterprise; the Japanese as yet were weak and inefficient in fleet flying.

Admiral Coontz, within the cramping restrictions of the Washington naval treaty, and despite domestic pressures to get back to a "normalcy" that never was, stabilized the Navy's manpower at a strength

USS Lexington *(CV–2) at anchor off Diamond Head in 1933. Mighty carrier task forces spearheaded America's drive across the vast Pacific in World War II.*

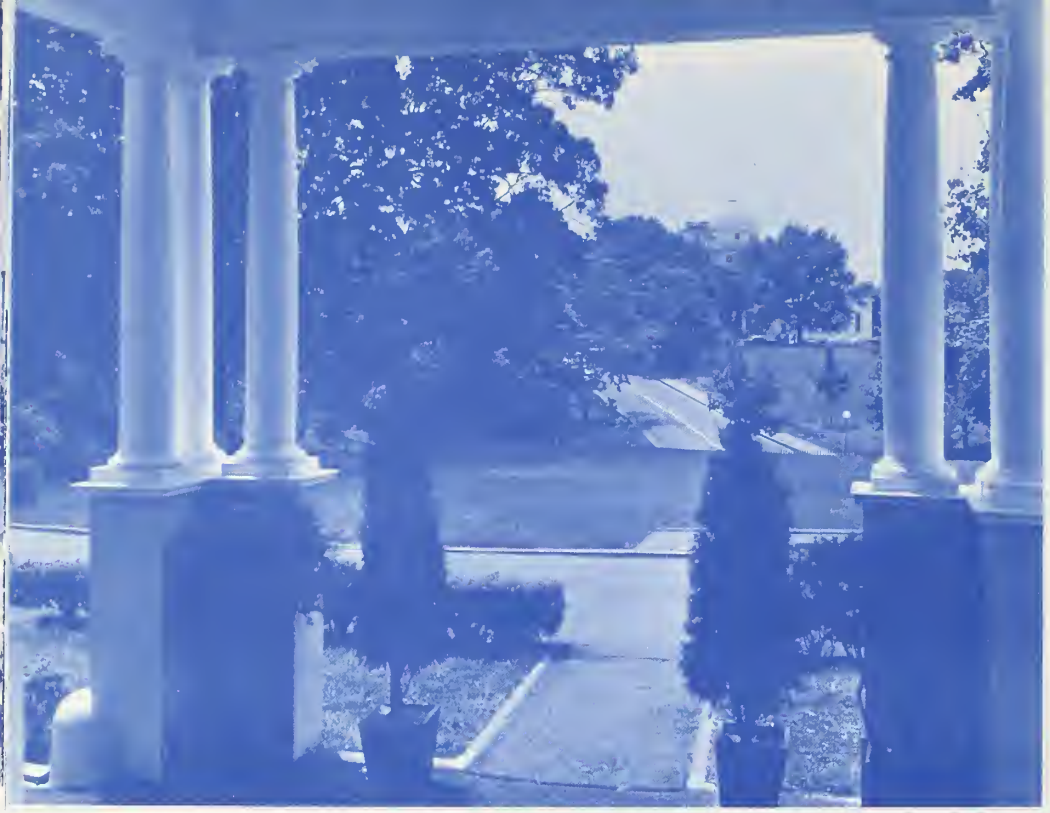
much above the prewar levels. This was far-sighted statesmanship. Though quiet temporarily prevailed in Europe where nations struggled painfully to rebuild war-shattered economies, storms gathered over the Orient. China, entering her second decade of revolutionary turbulence, stood on the threshold of deeper trouble.

It became increasingly necessary that maximum efficiency be wrung from every unit of an artificially limited Navy, operating on pared-to-the-bone budgets, while its new battle line, far along in the builders' yards, now melted away under the shipbreaker's torch. To meet this task when he took over 21 July 1923, the next Chief of Naval Operations, Adm. Edward W. Eberle, brought unequalled qualifications. Distinction in the service came to him initially as forward battery officer of the *Oregon* who fired the final shot at the Battle of Santiago. Eberle went on to command the Battle Fleet (1921–23) and to become recognized as the Navy's foremost training expert. In the latter field, he continued worthily the tradition stamped on the Navy by Thomas Truxtun, whose organization bills and instruction manuals, prepared for the *Constellation,* laid sound foundations for administration afloat and tactical training in the U.S. Navy.

Since writing the modern Navy's first gunnery and torpedo drillbook in 1900, Eberle had prepared the first radio instructions, devised the Navy's first radio code and, shortly before World War I, compiled the first minelaying and minesweeping tactical instructions. His long-range airspotting and smokescreens manuals followed afterwards and, while commanding the Pacific Fleet, he prepared the post-World War I fleet tactical system.

As Chief of Naval Operations, Admiral Eberle dispatched Marines to Shanghai to protect American citizens while, at the same time, the Special Service Squadron and Marine units of the missions in Haiti, the Dominican Republic, and Nicaragua kept the peace in the Caribbean where violent unrest has never been far from explosion for generations.

Most important of all, his testimony before the Morrow Board in 1925 was decisive in saving naval aviation for the Navy. The Board, set up by President Coolidge, charted the first national aviation policy for the United States. The Chief of Naval Operations, in maintaining that naval aviators must first be seamen and that naval aviation must be integrated into the fleet, convinced the Board and served the country well indeed. It insured the sound, balanced trident Navy without which the United States would have lost World War II, shipwreck from



The "Family Entrance" on the wide porch of Admiral's House commands a magnificent view of a broad terrace and the Observatory dome.

Four Star Flag Over Admiral's House

which there would be no return.

A year previously, in 1924, Admiral Eberle had played a role equally decisive in obtaining renewal of naval construction. In the years following the 1918 Armistice, ruthless application of the "economy axe"—in disregard of strategic realities—left the Navy dangerously short of modern cruisers to cover the long sea lanes spreading East and West to markets, sources of raw materials and friendly nations. Admiral Eberle stated the Navy's case with conciseness and overwhelming documentation that assured authorization of eight heavy cruisers of the *Pensacola* and *Augusta* classes that in a few years would repay their cost many times over.

To provide trained reserves, Admiral Eberle assured the state Naval Militia units of realistic training at sea, and strengthened the Naval Reserve. In 1926, he won authorization for the Naval Reserve Officer Training Corps units in universities. Held beyond the term of his four-year appointment, Admiral Eberle was relieved on 14 November 1927.

His successor, Admiral Hughes, was the first Chief of Naval Operations to occupy the quarters in the Naval Observatory that would come to be known as Admiral's House.

When Adm. Charles F. Hughes moved into Admiral's House, many Americans still held the illusion of peace for our time won by World War I. High hopes for disarmament still bemused many in the roaring, prosperous Twenties, but not in the Navy that faced facts. Leaders saw missions expanded across the seas of the world and technological changes carrying the Navy into the heavens, into the silent depths beneath, across so-called "impregnable" beaches, and into incredible scientific advance. At the same time they saw the size of the fleet reduced and operating funds cut.

Admiral Hughes was appointed, like his predecessor, direct from command of the Battle Fleet. Few officers had more experience than he in battleship duty. At the same time, few had more appreciation of the possibilities of naval aviation, which came of age in 1928, the year after Hughes took office. The aircraft carriers *Saratoga* and *Lexington,* converted from battlecruiser hulls, joined the fleet in the Pacific. The big carriers lost no time in performing

with spectacular success in the annual 1929 and 1930 war problem and maneuvers, and convincingly demonstrated the potentialities of carrier strikes against defended shore targets.

By now, however, the steadily growing cruiser strength abroad was causing grave concern to American naval authorities. The new Chief of Naval Operations pressed successfully in 1928 for 15 light cruisers and an aircraft carrier (the first of the U.S. Navy to be designed from the outset as a carrier and to join the fleet as U.S.S. *Ranger* in 1934). Yet despite his efforts, Admiral Hughes saw the cruiser program, so hopefully initiated under his direction, bog down as the "Great Depression" gripped the nation. Naval construction, which might well have served as a principal corrective to the economic dislocation, was severely curtailed. In this atmosphere the London Naval Treaty was negotiated, with full support from the Chief of Naval Operations because it limited expansion of the major foreign cruiser fleets.

On 17 September 1930, shortly after his return from the London Naval Conference, where he served as principal American technical adviser, Adm. William V. Pratt became Chief of Naval Operations. He, too, had held the top fleet commands, and during World War I had served as Assistant Chief of Naval Operations and, on occasion, as acting Chief. He was planning director of convoys. The convoy system, through the efficiency of the escorts in the Eastern Atlantic was the outstanding naval achievement of the war. Under Admiral Pratt, modernization was completed on the older battleships which in a decade's time were to dominate the beaches of North Africa, Normandy, and the Pacific islands from Tarawa to Japan.

Admiral Pratt also succeeded in getting the construction of eight cruisers funded. A high point

USS Salt Lake City, *a* Pensacola *class cruiser, saw action throughout the Pacific War.*

"Big E", USS Enterprise *(CV–6) and the heavy guns of the . . .*

of his tenure as Chief of Naval Operations was the unquestioned supremacy of American naval aviation. With an aircraft strength exceeding 1,000 in 1933, the United States possessed more than twice as many naval airplanes as second-ranking Japan; the 13,800 ton *Ranger* had a greater aircraft complement than the Japanese *Kaga*, twice the *Ranger's* size.

Typhoon signals in the Far East now became visible even to depression-racked America. Beginning with the seizure of Manchuria in 1931, aggressive totalitarianism commenced the march that burst into cataclysm at Pearl Harbor.

When Adm. William H. Standley hauled down his four-star flag in *California* and relieved Admiral

Pratt as Chief of Naval Operations, 1 July 1933, the simultaneous rise of Nazi tyranny clearly warned democratic states that they faced aggressors East and West who championed force as their prime instrument of national policy.

Admiral Standley sought to weld American economic recovery efforts, and especially funds made available for "pump priming" public works, to the needs of national defense. Often acting as Secretary of the Navy, working closely with President Franklin D. Roosevelt, who well understood the meaning of the sea to the United States, and the sage Representative Carl Vinson, of all legislators the most knowledgeable and experienced in naval affairs, Admiral Standley in no small measure shaped the framing of the Vinson-Trammell Act, the greatest single step to that time in naval preparation to meet the challenge to U.S. world leadership. In all, 102 ships were projected, the full tonnage under treaty limits that would enable the United States to negotiate from strength at future arms conferences, or to be better prepared for war should it come. In 1936, as Admiral Standley's term drew to a close, the world's uncertain currents were leading into open hostilities in all quarters: Spain, Ethiopia, and especially in Asia where Japanese militarists had launched full-scale war against the government of China. Some thoughtful citizens could not but wonder if America, in defense of her heritage of freedom, would not ultimately be

. . . USS South Dakota *(BB–57) struck with crushing power in World War II.*

called on to "quarantine" the aggressors.

It was the great good fortune of the Navy—and the nation—at this juncture to be able to order as Admiral Standley's relief another great Chief of Naval Operations, Adm. William D. Leahy. His unruffled demeanor overlay incisive intelligence and judgment informed by operating and broad administrative experience. A veteran of the *Oregon's* engineroom at Santiago and of World War I transatlantic convoys, Admiral Leahy had headed both the Bureaus of Ordnance and Navigation before going to top sea commands. He became Chief of Naval Operations and resident of Admiral's House in January 1937, as Japan's rising sun cast everlonger rays over the Far East. He found his judgment put to test there before the year was out. In December, Japanese aircraft over the Yangtze River sank the gunboat U.S.S. *Panay* without warning; evidence that the army had taken command in Japan and would shortly reduce civil government to impotence. On the other side of the globe the menace of Hitler grew swiftly.

Admiral Leahy made his greatest contribution as Chief of Naval Operations in pressing for increased naval strength commensurate with the threat posed by developing conflicts in Europe and Asia. His counsel powerfully influenced the Naval Appropriation Act of 1938 which added 20 percent to the Navy's tonnage. This legislation fixed naval aircraft strength at 3,000 and provided funds for construction of the aircraft carrier *Hornet* and *South Dakota* class battleships. The carriers *Yorktown* and *Enterprise,* authorized by the 1934 Vinson-Trammell Act, were already in service; the smaller *Wasp* was under construction.

The danger of a lag in base development was of particular concern to Admiral Leahy. He was no less insistent than Mahan that the Navy could best defend America by meeting aggressors in their own home waters. This sound concept made strategically located island bases mandatory. Under his guidance a board headed by Rear Adm. Arthur J. Hepburn made a detailed study of bases needed for air, surface, submarine, and mine operations for

naval defense of the United States. The board included in its recommendations that work be commenced on 25 airbases. Admiral Leahy obtained an immediate appropriation from Congress of $65 million for 15, extending from Kodiak through Pearl Harbor to Palmyra Island in the Pacific and from San Juan, P.R., to Quonset Point on the Atlantic. Leahy urged without avail the inclusion in the appropriation of Guam, key to American defenses in the western Pacific. Due, on 1 August 1939, to retire as Chief of Naval Operations and, as he thought, from an already long naval career, Admiral Leahy could look back with pride on the Navy's record of accomplishment in the two decades since World War I under Admirals Coontz, Eberle, Hughes, Pratt, Standley, and lastly, himself. Financially, most of these years had been lean indeed. Yet the Navy, within the most stringent treaty and fiscal limitations, struggled to maintain high efficiency in order both to carry out worldwide day-to-day duties in keeping the peace and to have ready against the hour of need a proficient nucleus for rapid expansion.

Considering funds available (from 1930 through 1939 the Navy's budget averaged less than $500 million annually), a large fleet was kept afloat, new ships built, and remarkable technological progress made. In these years, and the immediately preceding ones, while not foreseeing all needs the Navy made notable strides in aviation, antiaircraft gunnery, amphibious developments, radar, submarines, antisubmarine warfare and other fields including at the end of the 1930's pioneer steps in atomic energy.

From the Navy came such vital strength for America as the horizontal bombsight, the overwhelming tactics of dive bombing, the air-cooled aircraft engine, the full integration of aviation into fleet strategy and tactics. By the close of the 1930's the U.S. Navy had the best antiaircraft director and heavy AA gun in the world, steadily equipped ships with them, began to fire target practices at realistic radio controlled drones and had test radar afloat. Submarines increased in size and effectiveness. Sonar advanced against the grave days of enemy submarine threat. Ship design and equipment made steady progress in aircraft carriers, battleships, cruisers, destroyers as well as submarines. Metallurgical research, carried out under Navy direction, yielded "special treatment" steels for thinner, tougher armor. Fleet amphibious exercises developed techniques, doctrines, gunfire, and air-support methods, and outlined requirements for special amphibious craft.

These were likewise the years when the Navy, with its battle-trained Marines embarked, continued the time honored mission of protecting American interests and citizens in the revolution-torn West Indies, China, and elsewhere. Amphibious doctrine steadily developed against the critical days of need soon to break. In his final report as Chief of Naval Operations, Admiral Leahy warned: "The Navy must be sufficiently strong . . . and it must be adequately trained."

Adm. Harold R. Stark relieved Admiral Leahy on 1 August 1939; one month later Hitler hurled the Wehrmacht legions against Poland to begin World War II. Across the Atlantic, reaction was immediate: the American republics unanimously

Amphibious training in the Caribbean during the 20's and 30's developed tactics and taught lessons applied in the 40's, in the 50's, and today.

Fighting "four-pipers" strengthened the British Royal Navy in the desperate struggle against German U-Boats.

adopted the Declaration of Panama, establishing a broad neutrality zone around the continents, except for Canada. The Chief of Naval Operations deployed offshore destroyer patrols to prevent interference with nonbelligerent commerce.

The ensuing lull of "phony war," was shattered in May 1940 by "blitzkrieg" and Nazi conquest of Western Europe. In September, Japan adhered to the Axis; an unholy alliance especially directed against the United States.

The crisis permitted no delay in response. With President Roosevelt's backing, Admiral Stark spearheaded the drive for a "two ocean" Navy; Congress appropriated funds to double existing tonnage and construct, among other units, 10 *Essex* class fleet carriers, 9 *Independence* class light carriers, 6 *Iowa* class battleships and 5 larger *Montanas,* 8 *Baltimore* class heavy cruisers, 119 *Fletcher* class destroyers, and 67 fleet submarines. Had the United States been willing to build them earlier they would have been ready in 1941. Faced by power unassailable would the Japanese militarists then have dared to strike?

At the same time, in September, Admiral Stark directed delivery of 50 World War I "four-piper" destroyers to the hard-pressed Royal Navy, under the terms of the Destroyer-Bases Agreement by which the United States, in turn, would receive a chain of bases from Newfoundland to Trinidad. In antisubmarine operations the ships played a large role at a critical and desperate hour.

The Chief of Naval Operations on 12 November forwarded to President Roosevelt a memorandum on National Defense Policy calling for preparation of joint stategic plans with possible allies. Early in 1941, Admiral Stark, with Gen. George C. Marshall, participated in the Washington Conference with British representatives. Agreement was reached that the United States, should she become directly involved in the war, would accept an "offensive in the Atlantic and preliminary defensive in the Pacific" strategy—the principle that went into operation immediately after Pearl Harbor and a sparkling example of forehandedness in defense planning.

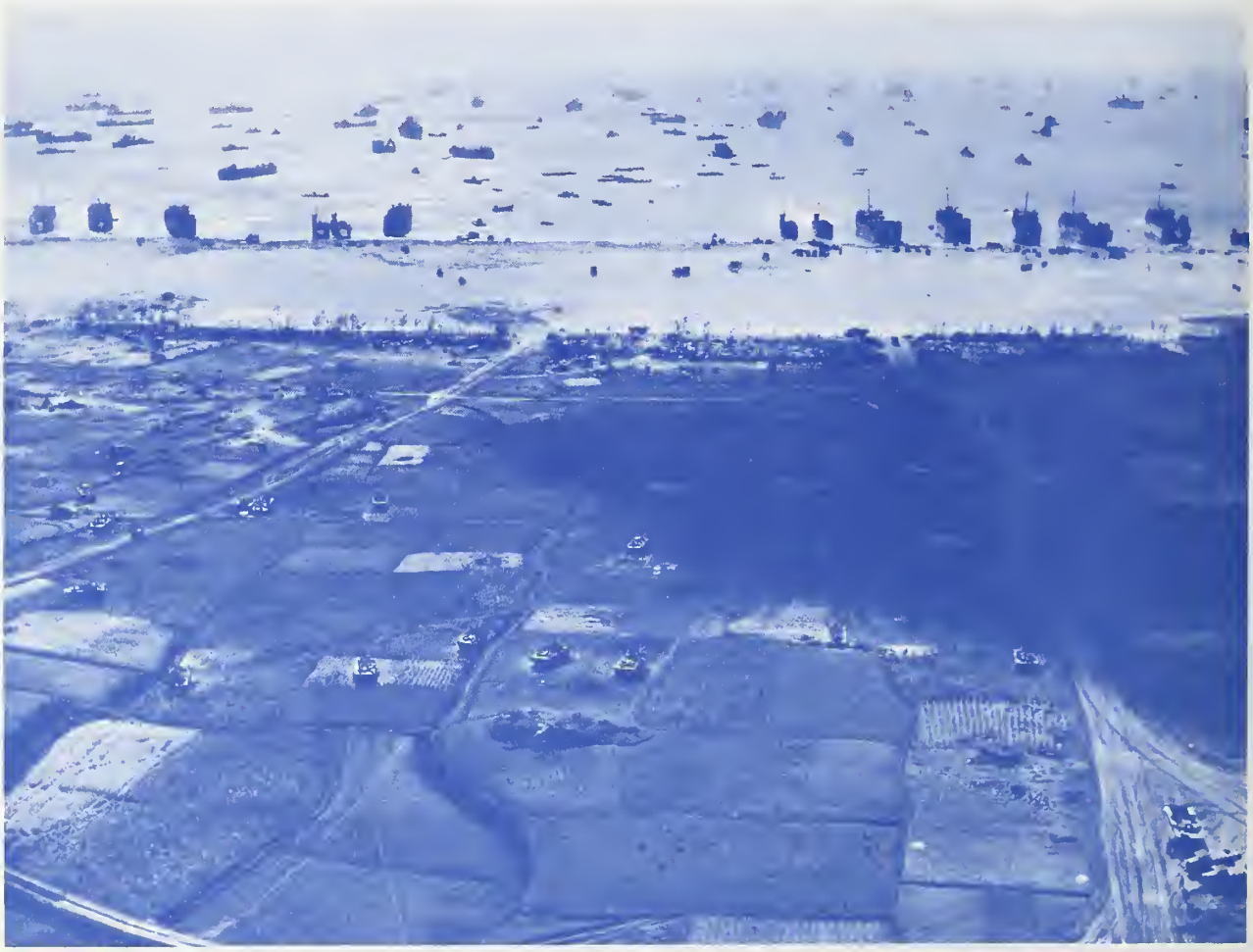
In February Admiral Stark directed that the Patrol Force be renamed Atlantic Fleet, and recommended that command be given to Rear Adm. Ernest J. King. The Atlantic Fleet was strengthened by transferring battleships and the carrier *Yorktown* from the Pacific to join new construction coming from the shipyards. "Lend-lease" logically called for U.S. naval assistance in transatlantic convoy if material aid from the "arsenal of democracy" was not in large part to end up in Davy Jones' Locker, for U-boat "wolf-packs" now ranged in full cry on the high seas. When the Navy landed its Marines in Iceland in July, at the request of the Icelandic government, the resulting supply convoys provided opportunity to safeguard "lend-lease" materials over the greater part of the Atlantic route. Finally, with presidential approval, Admiral Stark

in October ordered direct convoy to within 400 miles of Ireland. On the last day of the month, U.S.S. *Reuben James,* on convoy duty south of Iceland, was torpedoed with heavy loss of life. Then came December 7 and the perfidious attack at Pearl Harbor which brought the nation foursquare into the war, united in face of overwhelming danger.

The Navy responded to this disaster in the Pacific with cool and decisive action. On 30 December Admiral King assumed duties as Commander-in-Chief of the U.S. Fleet; the next day at Pearl Harbor, Admiral Nimitz broke his four-star flag in U.S.S. *Grayling* of his beloved submarine service. To centralize further the nation's naval effort in the supreme test to come, the functions of Commander-in-Chief and Chief of Naval Operations were combined by executive order on 12 March 1942. Admiral King next day was nominated, additionally, Chief of Naval Operations, becoming the only officer ever to hold both posts simultaneously.

Global war now precluded any save token use of Admiral's House by the Chief of Naval Operations. To relate in broadest outline the record of his wartime achievement is in fact to recount how the great strategic decisions from Pearl Harbor to V–J Day were shaped, how American naval operations in all theaters were planned and directed, and how opera-

Seapower projects its strength ashore.



tional commanders were selected and inspired to lead their commands irresistably across vast waters to culminating victory.

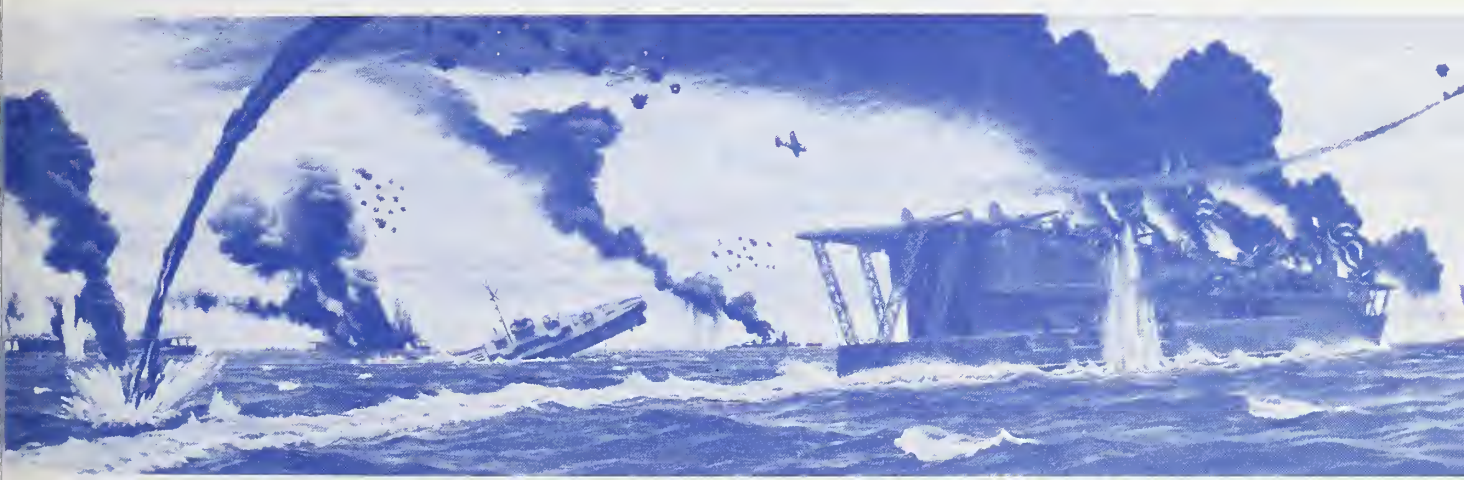
Austere, inflexible, and no seeker after popularity, the new Chief of Naval Operations' naval career had prepared him for these unprecedented responsibilities. An accomplished seaman and naval engineer of broad experience, he had qualified as naval aviator, headed the Bureau of Aeronautics, and commanded fleet aircraft squadrons. During his earlier years in submarines he had won two Distinguished Service Medals for directing salvage of the sunken *S–51* and *S–4*.

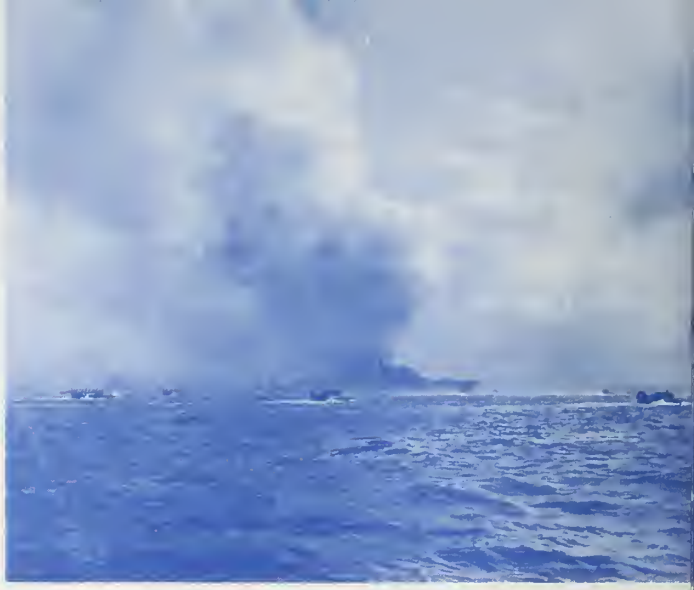
First and foremost, as a war leader Admiral King left a strong personal stamp on the strategy ultimately adopted, for as U.S. naval member of the Joint Chiefs of Staff and the Combined Chiefs of Staff he was totally dedicated, tough, realistic, outspoken to the point of bluntness, and hard driving. He teamed brilliantly with Admiral (later Fleet Admiral) Leahy, recalled from naval retirement and from the Ambassadorship to Vichy, France, to become personal Chief of Staff to the President. The Navy's senior statesman, Admiral Leahy, made his large contribution to the defeat of the Axis by tactfully coordinating Admiral King's plans and objectives into the major strategic decisions agreed to by the Allied heads of state and his fellow staff members.

As operating chief of the Navy, Admiral King organized seapower into the most versatile and awesome force yet seen. Developing tremendous power, the U.S. Navy became the most telling single demonstration of America's industrial might. Ashore and afloat the Navy's problems were handled with a technical competence testifying to the quality of her schools and colleges. Ships and planes were fought with a bravery hereditary in a free and democratic society. In short, the total power of the United States, projected by the Navy across all seas to all shores, stands as an object lesson to aggressors in the troubled years now and tomorrow.

All major naval movements were designated by Admiral King, and were planned and carried out by outstanding leaders like Admirals Nimitz, Spruance, Halsey, and Hewitt. In the Atlantic and European areas they included the North African landings, Sicilian and Italian invasions, essential in reopening the Mediterranean to the Allies and weakening the Axis' southern flank and, in 1944 the Normandy landing, the most complex single military operation yet attempted. These telling amphibious assaults took place in the somber context of the Battle of the Atlantic: the relentless struggle, in all seasons and weathers, against the lethal Axis submarines which struck from the deep. Admiral King organized the Tenth Fleet, responsible for con-

The great naval victory at Midway—one of the decisive battles in world history and the turning point in the war against Japan.





ducting the antisubmarine war, and pushed production of new weapon systems: escort carriers, destroyer escorts, airborne radar, sonobuoys, and the hunter-killer tactics which drove the U-boat from the Atlantic. In sinking nearly 200 Axis submarines, the U.S. Navy contributed mightily to ending the threat to sealanes which Prime Minister Churchill recorded as "the only thing that ever really frightened me during the war."

The Pacific appeared to Admiral King to present the greatest opportunity to exploit the mobility and versatility of seapower in all of its elements. To him was due the ceaseless pressure on heads of state and chiefs of staff to increase naval and amphibious force allocations to the war against Japan. The result was to create, far ahead of schedule, the devastating might of the U.S. Pacific Fleet. Superbly led by Admiral Nimitz, it swept the seas, as hard-working and hard-fighting Americans interwove the surface ship, the submarine, and the airplane into power uncheckable.

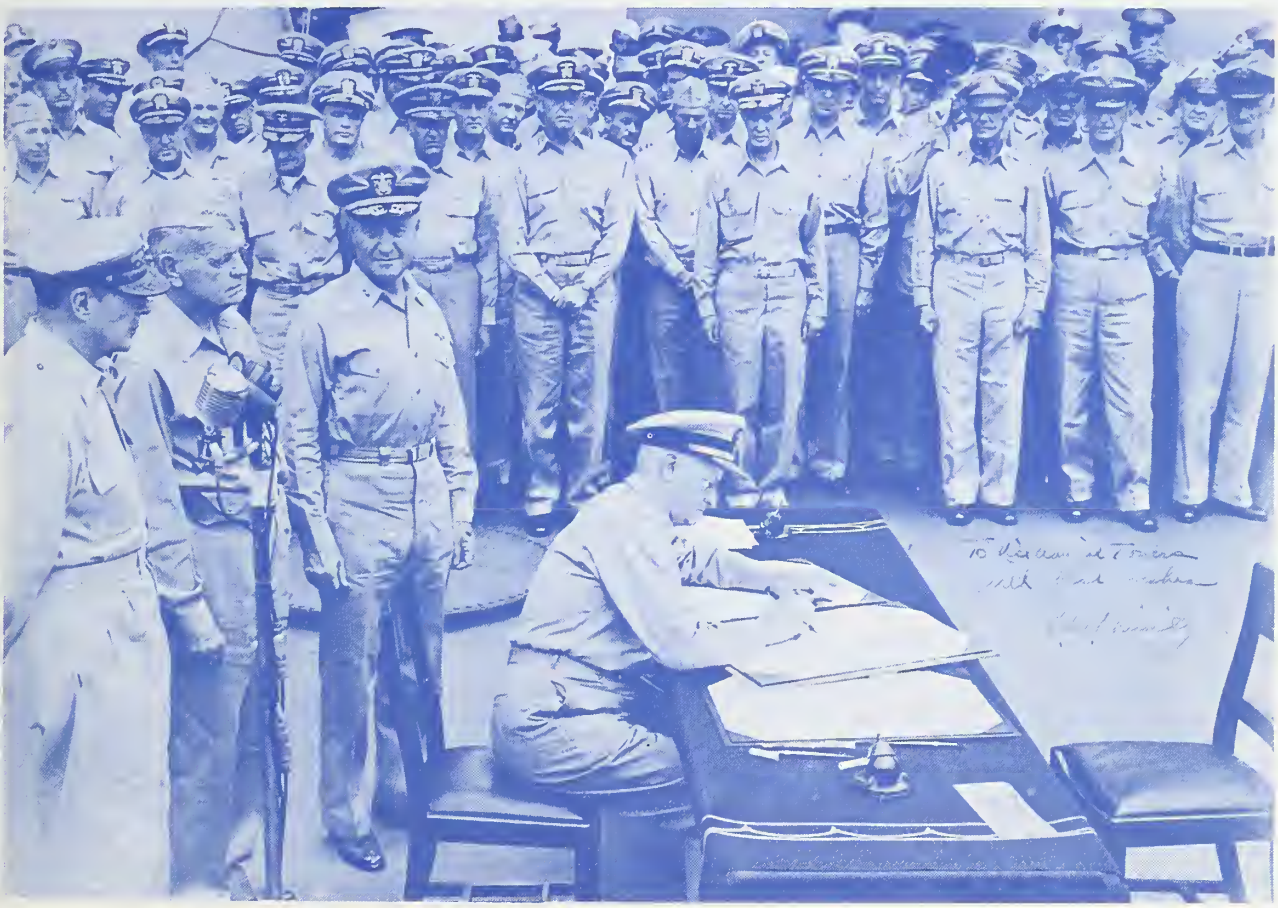
Spectacular in this awesome mobile seapower of the 20th century were the complex amphibious forces and embarked Marines which battled and leap-frogged their way to the enemy heartland; the crushing heavy gunfire support of battleship, cruiser, and destroyer; the submarines which annihilated shipping and severed the Empire's life-giving arteries; and the Fast Carrier Task Force, hardest hitting package of military might ever assembled. Capable of launching 1,200 plane strikes, the Fast Carrier Task Force was completely self-contained, carrying with it airfields, bases, and all needed supplies. Led afloat by such masters of sea-air war as the inspiring and aggressive Halsey and the thoughtful, self-effacing, supremely able Spruance, the carriers penetrated the innermost recesses of enemy held ocean areas at will, and struck directly at the Home Islands.

Equally revolutionary in the Navy's new mode of naval warfare under Admiral King was the unprecedented use of the Service Force of oilers, ammunition ships, refrigerator ships, and even sectional floating drydocks. Thus could the fighting ships fully replenish at sea and, for the first time in war, themselves remain in advanced operating areas for the entire duration of hostilities. Nimitz' great fleet left its permanent base at Pearl Harbor in 1944 and was not seen there again until after the surrender of Japan.

Not less significant in this naval war of movement, were the Construction Battalions, the "can-do Seabees." They achieved the next-to-impossible in tropical jungle and on coral atoll to create the ports, bases, and airfields vital in consolidating the captured areas behind the advancing Central Pacific and Southwest Pacific navies while the Naval Trans-

Across All Seas To All Shores

Fleet Admiral Chester W. Nimitz, USN, one of the most inspiring leaders in the Navy's long history, signs the Japanese surrender documents as United States representative on board USS Missouri *in Tokyo Bay.*



portation Service kept Army as well as Navy pipelines flowing to advanced bases. Finally, and of lasting importance to the security of the United States in the postwar world, Admiral King's strong hand pressed scientific researchers of the Navy, government departments, industry, and the universities into ever-closer relationship. Navy-directed research, for example, produced ever-better radar, jet aircraft propulsion and the V–T fused antiaircraft shell which played a leading role in turning the tide of battle.

In any review of naval leadership in World War II, Admiral King's contribution to shortening the period of hostilities must be judged of major importance. Accepting the need of first defeating Germany, he nevertheless held out, through thick and thin, in plenary conference sessions or in private conversation, with all associates whether head of state or military colleague, for dispatch of every available man, ship, airplane, and landing craft to the Pacific. For there the Navy was given fullest scope for its capabilities; setting forth in thousand-mile jumps to knife through archipelagos, leaving enemy defending forces on either hand to "wither on the vine," and moving ever-forward toward Tokyo Bay. "Ernie" King's toughness and tenacity carried his case and won support; power afloat poured into the Pacific areas. It thus became possible to take fullest advantage of America's "production miracle." Japan met defeat nearly simultaneously with the overthrow of the Nazi empire in Europe.

Great Americans of many types have served the United States in the Navy. In the fore rank of these is Fleet Adm. Chester W. Nimitz. Kindly yet inflexible in integrity, humane yet tough when the chips were down, simple in manner yet profound in understanding, he directed the Pacific war brilliantly, at first against appalling odds.

As he often stated, victory that culminated in Japan's surrender on board U.S.S. *Missouri* in Tokyo Bay came only because millions of Americans gladly gave their best, many their lives, that man might live free. Yet without leadership like his, this best, whether in the air, on the unresting surface warship, in the submarine deep below the waves, or on the beaches might have led only to despair.

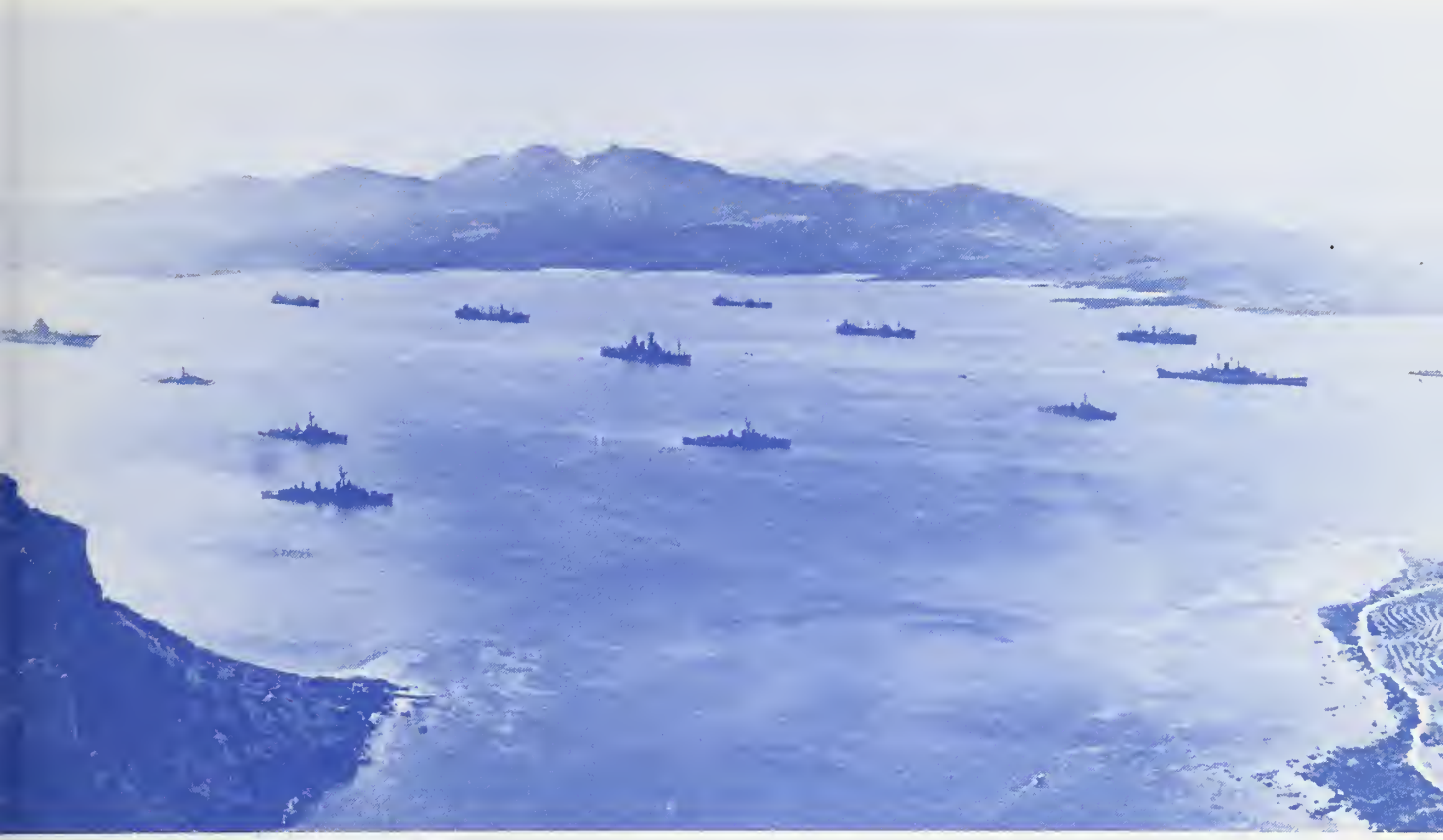
Admiral Nimitz was the logical successor to Admiral King. Washington went wild when he came home for the victory parade late in 1945 to be the first postwar Chief of Naval Operations and occupant of Admiral's House. He characteristically stepped out after two years so that a younger man might take the crucial post he had filled so effectively.

These two years were significant ones. When Admiral Nimitz took office the national urge was for rapid demobilization to "get the boys home." The large troop lift operation "Magic Carpet," using varied types of warships besides assault transports, sped to its end to make many families happy. Thereafter public demand continued to reduce the Navy along with other forces.

Nevertheless, under Admiral Nimitz' sagacious guidance the Navy continued to serve America well. After years of preparation significant steps were made toward nuclear ship propulsion that in less than a decade would result in the phenomenal success of *Nautilus,* man's first nuclear ship. Outstanding progress continued in many other fields: in naval aviation that included planes capable of setting a world's distance record that lasted into the 1960's; in ship design of all types; in antisubmarine warfare technology (potent new weapons of the Sixties follow from that time); in antiaircraft and other guided missile developments where the Navy had long been in the forefront; in power for the U.S. foreign policy such as reestablishment of U.S. naval strength in the Mediterranean—continuation of a historic need since the 1790's.

In these years it became apparent that war was won but peace was not. Communist designs to win the world were plain. They took over shattered Europe wherever their armies controlled. Greece and Turkey stood in imminent danger. The battleship *Missouri,* aircraft carrier *Franklin D. Roosevelt,* cruiser *Little Rock* and indispensable destroyers were dispatched to the Mediterranean, clear evidence of America's determination to say to the embattled people, "Stand firm . . . we are with you."

This decision was of the most far-reaching importance: Greece and Turkey held; Iran stood fast



"The Gray Diplomats" of the U.S. SIXTH Fleet in the Mediterranean.

against Soviet takeover; in the years to come Lebanon and the rest of the Middle East would be saved from catastrophe. The powerful "Gray Diplomats" had again shown the value of seapower reaching far across the globe to hold the line for freedom.

Adm. Louis E. Denfeld, who became Chief of Naval Operations in December 1947, continued the sound course Admiral Nimitz had set. Soon, following this first "police force," the Sixth Fleet sailed the Mediterranean, vigilant guardian of freedom like the squadrons under Commodores Preble and Decatur in the early 1800's. Likewise, the Seventh Fleet in the Western Pacific steadfastly kept Red China in check in waters where men like Commodore Matthew Perry had sailed to fame long before.

Despite expanding Communist aggression, when Admiral Denfeld relieved Admiral Nimitz in December 1947 the trend of thought in the United States still resembled that of the 1920's—we had crushed powerful enemies; now only armament stood in the way of harmony among nations; *ipso facto,* reduction in arms meant peace on earth. Unfortunately the Communists understood otherwise—on earth, purpose backed by power, not wishful thinking, controls man's destiny.

Notwithstanding Admiral Denfeld's strong efforts, budgets were cut, the Navy shrank, and with it our power for peace. The results again paralleled those after World War I. Crisis followed crisis in the ceaseless ambitions of man.

When the Soviets moved against weakness, the Berlin crisis brought the world to the brink of war. Naval transport squadrons joined in the Berlin Airlift and set an enviable record; naval supply ships

and tankers helped bring the cargo to be flown into Berlin and the fuel for the planes so that they might fly; control of the sea made all else possible.

As the crisis waned under the resolute stand of the United States and the efficient performance of planes and ships in the summer of 1949, Admiral Denfeld flew to Europe with the other Joint Chiefs to set up with allies the military organization that would give flesh and bone to the new structure of NATO. Out of it grew the united strength, founded upon the United States predominance at sea, of a powerful NATO alliance of land and sea that has steadfastly barred aggression in Western Europe.

At the same time that NATO laid strong foundations in the West, weakness grew in Asia ashore and afloat. Under budget restrictions, the U.S. Navy steadily shrank especially in its unique superiority of aircraft carriers. Since aggression has ever burst through weakened dykes, in 1950 the old unhappy lesson repeated itself.

Relieving Admiral Denfeld in November 1949, Adm. Forrest Sherman had been Chief of Naval Operations only a few months when the Communists invaded South Korea. Self-deluded America again awoke to reality, and it was grim indeed. While the West disarmed, the Communists had built up strength. They launched their attack, convinced that the unprepared West would yield to Communist imperialism.

Studious, farseeing and wise, Admiral Sherman soundly reexpanded the Navy—made possible in large part by the efficient Naval Reserve and the nucleus Reserve Fleet developed by Admirals Nimitz and Denfield. During his tenure at Admiral's House (as with most occupants) the lights burned long into the night, for he made a point of knowing through study with a mind that encompassed many things quickly.

Fortunately we did not have to meet a powerful Navy in the Korean War and we took command of the air from the outset. Thus, though greatly reduced, the fleet denied the sea to the enemy, kept ocean highways open for the flow of America's reviving strength, and played a key role with its skilled aviators from aircraft carriers, fighting Marines and devastating ship fire in helping the gallant Army stem the Communist onrush. It was just enough to check the enemy in the last bitterly held toehold on the tip of Korea.

Then under the masterful leadership of General MacArthur, seapower again greatly served America and freedom. Boldly employing the mobile flexibility and unique capacity of concentration, surprise, and crushing assault inherent in strength based

Versatile Strength—Hwachon Dam, Korea, blasted by torpedoes from carrier-based aircraft. Seapower has a long reach.

The amphibious "end run" to Inchon, Korea, in September 1950, once again demonstrated the flexibility and all-important mobility of Seapower.

afloat, General MacArthur won a great victory. Inchon was a perfect example of the terrific power in a nation's purpose concentrated on a single spot. It was also the perfect example of America's perpetual need to hold the sea. In the stirring minutes after H-Hour at Inchon, that meant the utter rout of the enemy in all South Korea, General MacArthur truly said, "The Navy and Marines have never shone more brightly . . . ."

The occupant of Admiral's House has far reaching responsibilities that take him to distant seas and troubled shores in person as well as in mind. Flying to Europe on an important politico-military mission for the President, Admiral Sherman suffered a heart attack and died, July 1951—a great citizen who lived first of all for his country.

Adm. William M. Fechteler, a veteran amphibious group commander of the major Pacific campaigns, was Commander-in-Chief of the Atlantic Fleet when he succeeded as Chief of Naval Operations and resident of Admiral's House on August 16, 1951. Vigorously he continued the buildup of the Navy needed to handle the Korean War. In 1950 when the Communists invaded South Korea, the active Navy had shrunk to 7 attack aircraft carriers, 8 light and escort types, 1 battleship, 13 cruisers, 136 destroyer-types and 72 submarines, plus specialized amphibious, mine and other types for a total of 671 ships. These ships were spread thin indeed for world responsibilities over millions of square miles of ocean. When Admiral Fechteler left office in August 1953 the Fleet had expanded to 14 attack aircraft carriers, 15 light and escort types, 4 battleships, 19 cruisers, 246 destroyer-types and 110 submarines plus specialized amphibious, mine and other types for a total of 1,129 ships in commission.

Because of the glamour and promise of the atomic bomb, after V–J Day 1945, the country as a whole had relegated amphibious warfare to the past. Korea returned it to proper perspective. Inchon, Wonsan, and lesser operations put the stamp of authority on the convictions of naval leaders that amphibious operations would continue to influence the future decisively in cold war and hot. From his own outstanding success in leading assaults on enemy shores in World War II, Admiral Fechteler

knew the effect and worth of this typhoon from the sea. He insured sound expansion in the amphibious forces along with steady progress in equipment and training.

Under his wise and positive direction the Navy had likewise forged ahead rapidly in research and development. Some of the world's first operational guided missiles afloat joined the fleet. Antisubmarine warfare weapons and tactics advanced measurably. Spurred by Communist use of mines, minesweeping and mine development shot ahead. Powerful new aircraft took shape for duty at sea in the Navy's air arm that fought so effectively in widely different types of missions through the Korean War. Nuclear propulsion for submarines raced to success.

In 1953 Adm. Robert B. Carney took the helm from command in the Mediterranean, decisive sea of history since antiquity. He had been CINC-SOUTH, a command that included the Southern and Eastern elements of NATO that reached into the fateful Middle East.

Admiral Carney astutely continued plans and operations of his predecessors in Korea, the Middle East, and around the globe where, if America's influence is to be felt at all, it has to be felt across vast sea spaces, as it was in the 1954 "Passage to Freedom" for thousands of refugees from North Vietnam, and the evacuation of the Tachen Islands.

He likewise urged forward the technical developments that assured for our protection world firsts in nuclear propulsion, missiles, advanced electronics, and remarkable antisubmarine warfare weapons.

He pressed hard for, and obtained, larger appropriations for new ship construction and vigorously advocated enlarging the active Fleet and adding personnel to meet the increasing tasks for which the Navy was responsible.

Admiral Carney clearly saw the emerging pattern of Russian interest in seapower and stressed this threat in the Navy's program of informing the American public.

U.S.S. *Nautilus*, first nuclear powered ship in the world, commissioned on 30 September 1954. Commander Wilkinson, 17 January following, flashed the stirring, "Underway on nuclear power." *Nautilus*, and the nuclear submarines which followed her, have the capacity to circumnavigate the globe submerged at high speeds. They can operate under the polar ice, where *Nautilus* would soon be the first ship to reach the North Pole. They cruise unseen wherever water reaches. Equipped with ballistic missiles, they bring dramatic new power to navies against shore based forces. Nuclear propulsion with like large promise for surface ships would follow, capped by the mighty carrier *Enterprise,* cruiser *Long Beach,* and frigate *Bainbridge*.

Similar striking success steadily unfolded in many other fields of the scientific Navy. Families of air and surface missiles were operational and more sophisticated versions sped on their way under Admiral Carney and his successors. Ships were converted and new ones specifically built as ever-moving guided-missile launching platforms packing

Submarine launched Polaris—freedom's silent sentinel and the nation's most awesome deterrent.

1. 1946 A U.S. Navy force, including the carrier FRANKLIN D. ROOSEVELT, visited the port of Athens to bolster the government of Greece and to check communism. The Greek Foreign Minister later said: ". . . The Sea stands for freedom of every human soul; to us it stands for life itself."
2. 1948-49 During the Berlin Airlift, a convincing proof of the value of firmness in maintaining rights, 24 Naval planes took part, flying 45,990 hours and carrying 129,989 tons of supplies to the beseiged city. The surface Navy insured the transport to Europe of enormous quantities of the supplies and the fuel for the airlift.
3. 1950-55 Large naval forces projected massed allied strength overseas to sustain South Korea, maintain control of the seas for assault or retirement, provide powerful air and gunfire bombardment and unrestricted logistic support, mobility, speed, and flexibility in combined operations—thus containing the war and ensuring peace.
4. 1954 United States Navy provided a "Passage to Freedom" for over 300,000 refugees from North Vietnam to the south. To nations of the Pacific, the 7th Fleet stands for hope and liberty.
5. 1955 At the request of the Republic of China units of the SEVENTH FLEET evacuated troops, civilians, and tons of material from the Tachen Islands off the China mainland. The impressive power of the fleet discouraged communist interference.
6. 1956 When the Suez-Middle East Crisis became critical SIXTH FLEET ships evacuated American and allied nationals. An evacuee safe on board wrote: ". . . We never realized how much the Flag meant to us until we saw it on the sterns of the landing craft."
7. 1957 In late April and May 1957, the SIXTH FLEET deployed in the Eastern Mediterranean to support the regime of Jordan's King Hussein and avert World disaster. "Jordan . . . has been saved for Western Civilization by Bedouin Knives and the SIXTH FLEET."
8. 1958 Ever ready with men, guns and planes the SIXTH FLEET at the request of the Lebanese government, landed its 1,800 Marines on a beach near Beirut, with ship batteries trained out and carrier planes overhead. "In the powerful grey diplomats of the SIXTH FLEET, we see the guarantee of small peoples' independence."

Some recent examples of the U.S. Navy employed in keeping the peace, containing war, and guarding freedom since World War II.

(9) **1960** At the request of the governments of Guatemala and Nicaragua, surface and air units of the U.S. Navy took position to provide assistance if required. Their presence dissuaded the would-be invaders and another tense situation eased.

(10) **1960-61** Violence erupted in the Congo, Atlantic Fleet units including USS WASP (CVS-18) sped to the African coast transporting United Nations troops to the Congo, and emergency supplies to relieve starvation. The prompt action of the Navy backed UN mission prevented communist domination of this key African Nation.

(11) **1961** Supported by large task forces of the Navy, the United States began a long-term buildup of strength in South Vietnam to thwart aggression there.

(12) **1961** When the East German communist regime erected the Berlin Wall, the Navy activated Reserve ships and men to meet any crisis.

(13) **1962** On 24 October the air and surface units of the Atlantic Fleet established the Quarantine of Cuba to force withdrawal of Soviet ballistic missiles. Power afloat had provided the President with the power and flexibility necessary to keep the peace.

(14) **1963** The Dominican Republic's threatened invasion of Haiti brought out the U.S. Navy to the scene, prepared for any contingency. The crisis subsided.

(15) **1964** During the Zanzibar political crisis, USS MANLEY in order to guard American citizens and interests evacuated American and allied nationals. On her decks the sovereignty of America reached half around the world in support of freedom.

(16) **1964** On 4 August USS MADDOX and USS TURNER JOY destroyed attacking North Vietnamese PT boats in Gulf of Tonkin. On 5 August SEVENTH FLEET carrier aircraft from USS TICONDEROGA and USS CONSTELLATION struck North Vietnamese bases destroying a number of PT boats in retaliation for unprovoked attacks on the U.S. Destroyers. Naval air has rapid reaction time, a long and powerful reach.

(17) **1965** As revolutionaries ran wild in the Dominican Republic units of the SECOND FLEET including BOXER landed Marines and Army forces in Santo Domingo to evacuate U.S. nationals, to help maintain law and order, and to block a communist coup.

(18) **1967** War broke again in the Middle East, the third time since World War II and furthering Soviet aims in that strategic area. The SIXTH FLEET exerted a strong, stabilizing force in an explosive situation.

(19) **1961-70** Based on the sea and its broad highways, the United States defends liberty in Southeast Asia. "The U.S. Navy", as has been written, continues to be "today's greatest power for peace."

Ever searching to advance man's knowledge the Navy probes the ocean's inner space as in the Sealab program, and the outer space of the universe with Solrad IX satellite.

a potent punch. U.S.S. *Forrestal* joined the fleet in 1955 leading a class of large, angle-decked attack carriers capable of handling the most modern jet aircraft.

The foregoing, plus large achievements in submarine detection, solid rocket fuels, exploration of the upper atmosphere and the dark inner space below the sea, satellites for navigation, communications, and radio astronomy illustrate the comprehensive research and development aimed at keeping the Navy our first line of defense today as in the past.

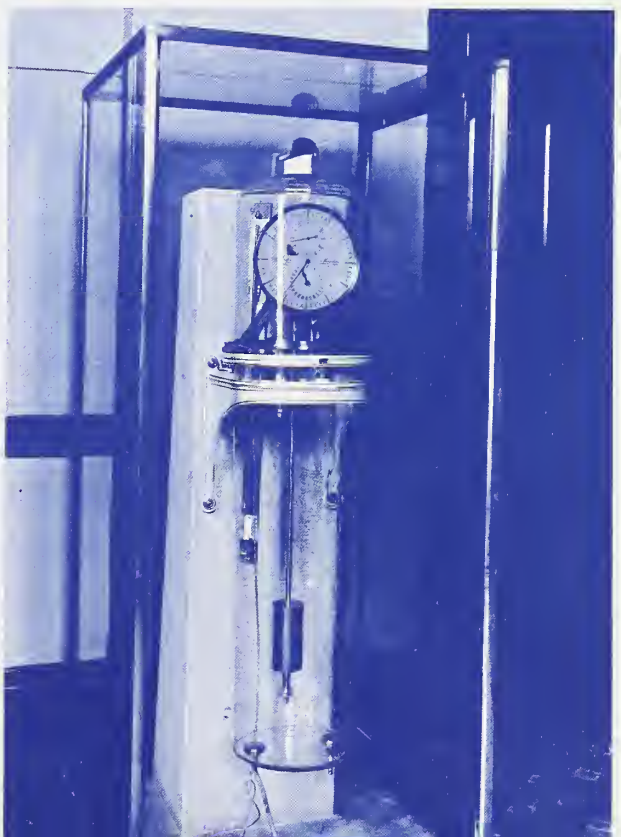
The fleets and their weapons change, but in the profound words of Fleet Admiral Nimitz, "The Navy is constant, and so is the meaning of seapower. . . . The sea is a way of life. It is the highway over which our commerce flows in two directions, and will flow as far into the future as we can see. . . . There will always be a Navy. . . . The Navy is always learning to the end that it may always be prepared."

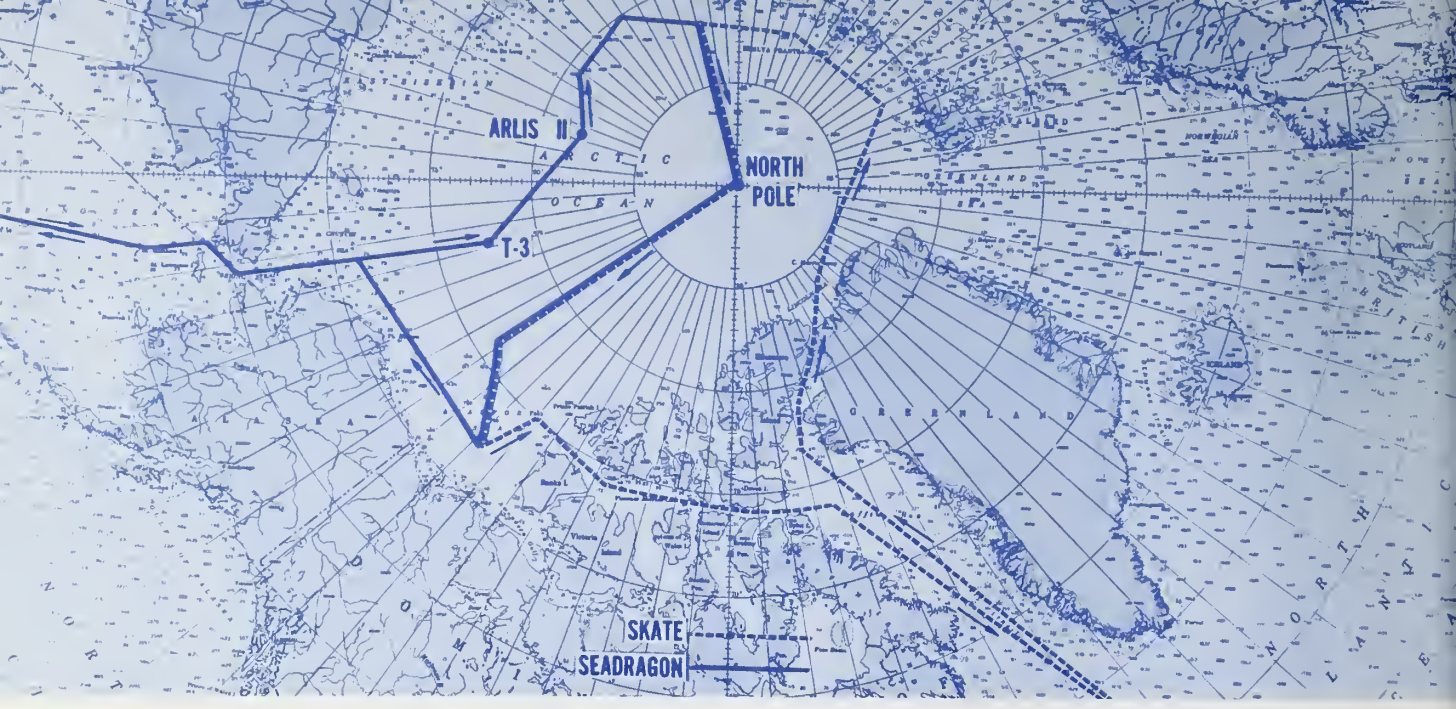
In 1955, Adm. Arleigh Burke took the watch from Admiral Carney with the same firm hand and driving purpose that had won him fame as "31-knot Burke" in the furious battles of the South Pacific. Every Chief of Naval Operations makes decisions that continue to affect the United States and the world's future long after he leaves office. Few decisions, however, have had such dramatic and swift impact upon the balance of power and fate of nations as Admiral Burke's on the Polaris submarine. Early in his unprecedented six years of office he created the Special Weapons Task Force, assigned it some of the best talent of the Navy and diverted from other critical demands the large funds needed.

From a dream in 1955, many seemingly impossible barriers were shattered and breakthroughs accomplished to produce in phenomenal time the most powerful weapon system in history—the atomic submarine armed with the nuclear ballistic missile. On 20 July 1960, U.S.S. *George Washington* proudly

On earth and in space, precise time measurement is the heart of navigation and of space operations. The Riefler Clock (below) pictured about 1903 and the Atomic Clock of 1967, document the Naval Observatory's leadership in this vital science. The Atomic Clock measures time to one millionth of a second.

Missions of mercy are deeply rooted in our naval heritage.





Track of the nuclear submarines USS Skate *and* USS Seadragon *in their historic rendezvous under the North Pole ice pack.*

launched her first Polaris missile that surged up out of the sea to hurtle over a thousand miles down range precisely to target. America had acquired a new strength irresistible—and peace a new champion of giant stature.

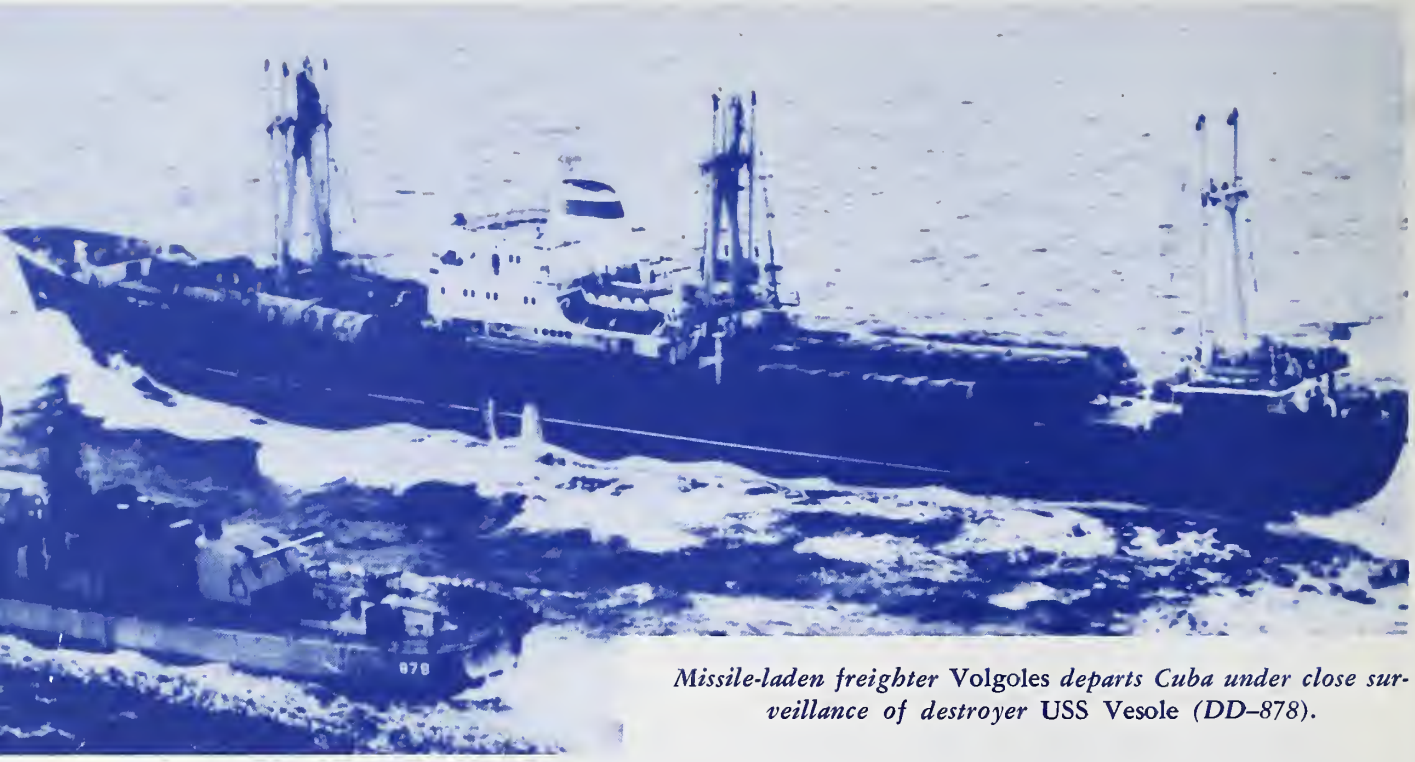
Events of great moment marked Admiral Burke's tour. Many took place far around the world where seapower extended to hold the frontiers of freedom. Intensive Communist exploitation continued. Explosive situations primed to erupt into large-scale conflict, as in Suez, Syria, Jordan, Quemoy, and Matsu, were successfully met by America in large part because of the Navy's capability to bring a powerful deterrent to bear by its very presence, deployed and ready in international waters off danger spots.

For example, Lebanon, threatened by overt aggression in 1958, requested direct U.S. assistance. Powerful units of the Sixth Fleet suddenly and dramatically appeared out of the sea off this ancient Phoenician coast where history has so often been made. On 15 July, these mighty ships with massed guns and concentrated airplanes swept in to land their Marines at Beirut. Once more the "Gray Diplomats" carrying with them the power that makes diplomacy succeed, promptly assured a small nation's independence—and just as promptly withdrew when the crisis quieted. Thus, did seapower operate in its classical manner of swift application of just the right amount of power to quench an ember before it becomes a conflagration to involve the world.

There were many other events of lasting importance to America in Admiral Burke's 6 years, as there have been in almost every year of the Navy's long and proud service of striving to keep the peace, protect our shore, and carry war, should it come, across the seas to the enemy. These included far-reaching modernization efforts embracing nuclear powered ships, guided-missile men-of-war, mammoth aircraft carriers, supersonic aircraft, new concepts of sea-based striking forces and streamlined amphibious operations—all designed to meet the requirements of nuclear warfare. Yet among them all, the Polaris submarine has a distinction of its own—a great dream driven with seamanlike precision to accomplish "the impossible" and to produce a phenomenal increase in sea-based strength. It is an increase similar to that of steam, the submarine, the aircraft, and radar. It is an increase that may well hold the key to man's dream of world freedom.

Vital Antarctica supply line forged through the ice pack.

Guided missile cruiser USS Albany *on 30 January 1963 successfully fired three surface-to-air test missiles simultaneously—the first such launching by any navy in the world.*



Missile-laden freighter Volgoles *departs Cuba under close surveillance of destroyer* USS Vesole *(DD–878).*

In August 1961, again significantly from the Mediterranean, came the next in the long line of eminent leaders who have shaped America's course at sea. Adm. George W. Anderson brought to the office an outstanding record as Commander of the Sixth Fleet. In turning over the watch to him, Admiral Burke said: "The coming months and years will offer the supreme test of our concept of life, a concept based on the abilities of the sovereign individual; on disciplined individuals motivated by fundamental principles, by a sense of justice, by moderation and integrity."

Under Admiral Anderson's direction the Navy continued on watch day and night throughout the world unresting in serving to keep the peace; to be "ready now" if crisis comes; and while carrying out these grave operating responsibilities still to speed on into the technical and scientific changes that hurl mankind into the space age.

Crisis did come with world-shaking impact in the Caribbean. The Cuban missile confrontation of October 1962 tested the nation's steadfast determination and the Navy's capability to meet sudden threat of nuclear conflict. Charged with a responsibility of utmost importance in this critical hour, under Admiral Anderson the Navy in traditional style went into action promptly, smoothly, with restraint but ready for whatever might happen. Swiftly executing the President's decision, ships converged on Cuba to set up the "quarantine" that the Soviets proved unwilling to challenge.

Once again Americans had impressed upon them the deep meaning of control of the sea. Instant in response, versatile and flexible, capable of concentrating a torrent of power, or acting with sheathed sword in international waters, it enters with controlling force into every facet of the nation's foreign policy. Off Cuba, its wise use by the United States to block a hostile nuclear foothold in the Western Hemisphere was the difference between Soviet withdrawal and world catastrophe. This grave hour, like so many other earlier instances of keeping the

peace, proved that the Navy in the nuclear age, as in the past, remains the power of diplomacy as well as the nation's overseas line of defense in conflict.

For another year Admiral Anderson ably directed the Navy's steady growth in capabilities, as in the expanding Polaris submarine force, unique amphibious ships, impressive progress in antisubmarine warfare, and in a wide range of other complex developments from the depths of the sea to the depths of space. At the same time, under him the far-flung fleets continued on watch day and night on freedom's frontier ready to check conflagrations from the Caribbean, as in Haiti, to the eastern Mediterranean, Zanzibar, and Southeast Asia.

On 1 August 1963, Admiral Anderson handed over his heavy responsibilties to Adm. David L. McDonald.

Coming to the job from Commander-in-Chief of U.S. naval forces in Europe and, immediately before that, of the far-ranging Sixth Fleet, Admiral McDonald brought to defense problems and policies the comprehensive knowledge of world affairs which had likewise enriched his predecessors' service to the nation. Foremost among the problems confronting the world was mounting Communist aggression in South Vietnam. Under American leadership and behind the U.S. Navy, by its power alone making the "free sea" truly free, aggression has been checked and liberty sustained. Key to this success has been at home the resolution of the

Antisubmarine warfare demands constant research, training, and a broad variety of ships and aircraft.

USS Enterprise *(CVA(N)–65),* USS Long Beach *(CG(N)–9), and* USS Bainbridge *(DLG(N)–25) demonstrate the staying power of nuclear powered ships in Operation Sea Orbit.*

President, and will of the people, and abroad the United States control of the sea that has made possible the concentration and support of U.S. military power of all types in southeast Asia. Furthermore, the greatly expanded naval interdiction of Viet Cong and North Vietnamese infiltration, the steady buildup of river patrol, blockade, gunfire support, amphibious operations, and aircraft carrier strikes, both tactical and strategic, by early 1966 had contributed powerfully to restore the military situation in Vietnam.

Vietnam has been only one facet of the Navy's continuing worldwide responsibilities of keeping the peace, protecting American interests, showing the flag, linking allies of freedom together across the vast seas. In August 1964, a nuclear powered task force consisting of the aircraft carrier *Enterprise,* guided missile cruiser *Long Beach,* and guided missile frigate *Bainbridge* commenced "Operation Sea Orbit," an epochal 30,000 mile circumnavigation of the globe at high speeds and without refueling or replenishment. Here the mobility and rapid deployment capability of seapower received a classic demonstration while Vietnam conclusively revealed its selectivity and flexibility. This nucelar task force, self-sufficient and powerful, contained arsenals of aircraft and weapons unmatched for completeness and variety by anything in the world.

America's Space Age Navy plays a key role in man's reach for the stars.

Under Admiral McDonald, the lessons of Vietnam and the progress of the atomic revolution in propulsion dramatically pointed out to Americans that even more than ever in the past, salvation lies in sea-based strength.

From ancient times, seapower has shaped destiny. Every great nation has had to control the sea, from Phoenicia to Britain. The United States must. As Admiral McDonald has stated, "A naval force can be there at will, quietly and to any degree required by the existing job." This range of capability he has called, "selective fine tuning of national action" and, with equal aptness, "on-call selective use of seapower." The United States is irrevocably committed to leadership of the free world and to an alliance of free nations. Responsibilities of that commitment require projections of national power to all parts of the world to strengthen friends and to resist aggression.

The Navy's responsibilities in the national defense team are clear:

(1) It mans the free world's frontiers with Polaris deterrents.

(2) As in the earliest days of navies, it keeps the sea-lanes open, the highways for projecting the United States total strength.

(3) It must prevent hostile submarines from reaching firing positions.

Crewmen step lively as **USS Ranger** *launches an air strike off South Vietnam.*

(4) It must accept the possibility of conflict with an enemy which would be limited to the sea because of nuclear deterrents.

(5) It provides immediate readiness, great selectivity, and range of capabilities in meeting the crises of "brush fire" or limited wars—capabilities that can expand to include major combined operations when needed.

In dealing with all these responsibilities, as Admiral McDonald put it, "Seapower can be projected when, if, and as required. This type of military power can be moved at the sole decision of the United States, quietly, or otherwise, as the situation requires. It can be recalled instantly. It is self-sufficient and ready upon arrival to cover the entire spectrum of possible needs—from simply showing the flag, to landing a police force, to full combat."

Admiral McDonald retired from the Navy after forty-three years of service 1 August 1967. His relief as Chief of Naval Operations was Admiral Thomas H. Moorer—a naval aviator with significant World War II combat achievements, experienced in all facets of naval operations, and a seaman skilled in diplomacy.

Admiral Moorer was uniquely fitted for the Navy's top command. He came from duty as NATO Supreme Allied Commander Atlantic, and Commander in Chief, U.S. Atlantic Command and U.S. Atlantic Fleet. Before that, he had commanded the SEVENTH Fleet in the Western Pacific and later the U.S. Pacific Fleet. Admiral Moorer was the first CNO in the Navy's history to have had command of both the Atlantic and Pacific Fleets.

As CNO, Admiral Moorer was quick to point

USS New Jersey *(BB–62) off Vietnam fires her mighty guns against enemy positions far inland. "I have seen the* New Jersey *fire and I can tell you that us Marines find it a great comfort to know that if we ever needed her we could have her. I can say that I slept a little better knowing she was around. . . ."*

wy medics bring hope to Vietnamese civilians.

Riverine operations are vital.

out the emergence of a Soviet Navy capable of extended operations in all the world's oceans. A swiftly growing merchant marine, the largest submarine force in the world, heavy concentration of guided missiles and overall naval strength second only to the United States had made the USSR increasingly formidable. He said: "I see significant events taking place in this unstable world that foretell increasing activity at sea in the years to come. . . . We see the development by the Soviets of a large and modern merchant marine plus the second largest Navy in the world. . . . We see the world-wide populations which generate an ever-increasing dependence on transport across the sea."

Admiral Moorer's warning was borne out by a large increase in the Soviet Mediterranean squadron, an increase of their activity worldwide, and the visit of an eight vessel Soviet Task Force to Havana in late July 1969.

In Vietnam, seapower continued to play a vital role. More than 80,000 Marines there represented the largest concentration of Leathernecks ever ashore in one campaign.

Seabees built ports, bases, roads and airfields with unprecedented speed. When not in battle, doctors, chaplains, and Navymen from units afloat and ashore conducted a highly effective program of civic action, building schools, homes, hospitals, providing medical services and training the Vietnamese in new skills.

Offshore and inshore the Navy entered into battle against the enemy with an integrated effort. Navy carrier pilots supported friendly troops in combat, ranged far inland to attack enemy lines of communication, artillery and missile sites and supply dumps. Amphibious Ready Groups landed Marines in swift surprise attacks to envelop the enemy in coastal strongholds. Gunfire support ships smashed enemy batteries and strong points, destroying logistic boats and providing accurate bombardment in support of U.S. and allied troops. More than 300 ships of the United States Navy, Coast Guard, South Vietnamese and allied navies conduct around-the-clock counterinfiltration patrols.

In the canals, rivers and jungle swamps of the Mekong Delta and elsewhere, shallow draft craft of the United States and South Vietnamese Navies denied the Vietcong use of the waterways. Well armed river monitors, jet-propelled boats, and armed helicopters of the Mobile Riverine Force aggressively sought out enemy concentrations and projected troops into the jungle to destroy Vietcong forces.

At the same time, Service forces and the Military Sea Transportation Service maintained an uninterrupted passage of supplies to Southeast Asia.

Admiral Moorer described the nature of Navy operations in and off Vietnam when he noted: "Our Navy and Marine forces utilize every available technique and skill. Tactics akin to those used by gunboats in the Civil War are exploited. At the same time off shore, our carriers and amphibious task forces are operating with the most complex and sophisticated electronics and weapons systems known to man. On board our Navy river boats, the seaman's eye and the bamboo pole are used to navigate, while far at sea, satellite navigation systems guide our ships."

On the other side of the world, the U.S. SIXTH Fleet in the Mediterranean lends a stabilizing presence in the areas of tension at the eastern extremity of that great sea. Other forces operate in the Caribbean, Northern Pacific, Middle East, Arctic and elsewhere in the pursuit of stability and peace.

Under Admiral Moorer, the Navy continued to forge ahead on the crest of the advancing wave of technology. Important developments included the S–3A Antisubmarine aircraft, a new destroyer type, the F–14 fighter aircraft, high speed as well as electric drive nuclear submarines, the LHA Amphibious Warfare ship and the NIMITZ class aircraft carriers.

Perhaps the most historic and noted event in which the Navy participated during 1969 was Apollo 11, climaxed by the recovery of the spacecraft by the carrier *Hornet*.

Admiral Moorer summed up the dynamics of change which has typified the progress in the Navy's operations: "Throughout my service, as long before, the Navy has operated in a constantly changing environment. Gratefully, it has been a change based upon the sound foundations of past experience. The

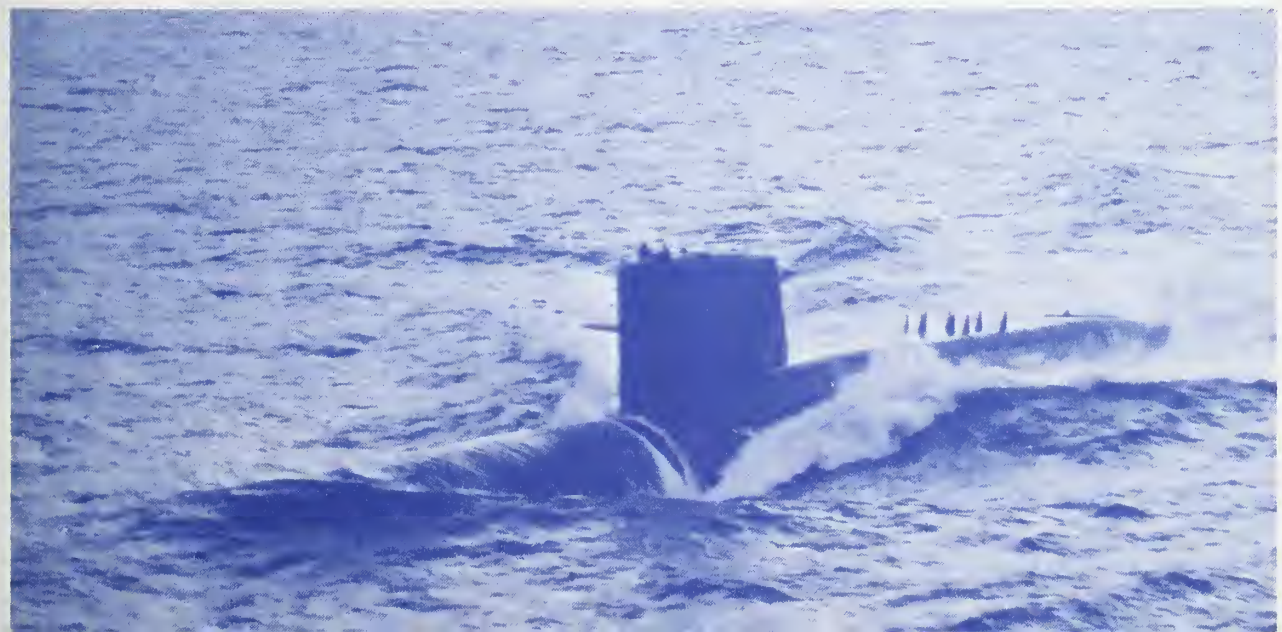
Seabees "can do"—a security fence goes up in the mire of a Vietnamese rice paddy.

more we learn from this experience and make every effort to incorporate the best of the past into new development the more rewarding our results will be." Long before space flight seemed a tangible hope, developments took place for other purposes in the Navy with direct application to space operations—for example, early radio, radar, and in 1941 Dr. Charles Draper's work with gyroscopes (for gunsights) whose descendants function in space vehicles today. A host of other achievements has issued from the Navy's network of laboratories, proving grounds, and intermeshing support of research in industry and universities.

This is as it should be, for the Navy with its complex requirements for serving America on the sea, under it, on its edge, and into space above, cuts across the full range of this country's remarkable scientific, technical, and engineering history. This has long been so since Maury from the old Naval Observatory served the world looking out into space; or a generation later when Ens. Albert A. Michelson, USN, a recent Naval Academy graduate ordered ashore to the faculty there, with midshipmen assistants began his famous measurements on the speed of light as it ranges out into infinity; or still another generation afterwards when U.S.S. *Birmingham* and U.S.S. *Pennsylvania* provide the "carriers" for the world's first airplane takeoff and landing afloat—the beginning of wings from the sea.

These are but highlights in a long and stirring list that includes leadership in radar, radio astronomy, nuclear propulsion, space surveillance, satellite communication, inertial navigation guided by the forces of the universe, atomic time. And the number grows at an astronomical rate. Hence this brief account may appropriately state again at the end as at the beginning: It is fitting indeed that the Chief of Naval Operations of America's complex scientific Navy, steaming with wide-open throttle into the space age, should dwell in Admiral's House amidst the Navy's oldest and first famous venture into the mysteries of the heavens.

Fleet Ballistic Missile Submarine* George Washington *and elusive sister ships guard the ramparts of liberty.



Fleet Admiral William D. Leahy
2 Jan 1937—1 Aug 1939

Admiral Harold R. Stark
1 Aug 1939—26 Mar 1942

Fleet Admiral Ernest J. King
26 Mar 1942—15 Dec 1945

Admiral Louis E. Denfeld
15 Dec 1947—2 Nov 1949

Admiral Forrest P. Sherman
2 Nov 1949—22 Jul 1951

Admiral William M. Fechteler
16 Aug 1951—17 Aug 1953

Admiral Arleigh A. Burke
17 Aug 1955—1 Aug 1961

Admiral George W. Anderson
1 Aug 1961—1 Aug 1963

Admiral David L. McDonald
1 Aug 1963—1 Aug 1967

Fleet Admiral Chester W. Nimitz
15 Dec 1945—15 Dec 1947

Admiral Robert B. Carney
17 Aug 1953—17 Aug 1955

Admiral Thomas H. Moorer
1 August 1967—

LEADERSHIP . . . Vital element of Seapower

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